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**Evaluating Components of International Migration: Quality of
Foreign-Born and Hispanic Population Data**

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Synopsis

On March 1, 2001, the U.S. Census Bureau issued the recommendation of the Executive Steering Committee for A.C.E. Policy (ESCAP) that the Census 2000 Redistricting Data not be adjusted based on the Accuracy and Coverage Evaluation (A.C.E.). By mid-October 2001, the Census Bureau had to recommend whether Census 2000 data should be adjusted for future uses, such as the census long form data products, post-censal population estimates, and demographic survey controls. In order to inform that decision, the ESCAP requested that further research be conducted.

Between March and September 2001, the Demographic Analysis-Population Estimates (DAPE) research project addressed the discrepancy between the demographic analysis data and the A.C.E. adjusted estimates of the population. Specifically, the research examined the historical levels of the components of population change to address the possibility that the 1990 Demographic Analysis understated the national population and assessed whether demographic analysis had not captured the full population growth between 1990 and 2000. Assumptions regarding the components of international migration (specifically, emigration, temporary migration, legal migration, and unauthorized migration) contain the largest uncertainty in the demographic analysis estimates. Therefore, evaluating the components of international migration was a critical activity in the DAPE project.

This report addressed the question: “How do edit and imputation procedures affect the consistency of foreign-born and Hispanic populations?” Comparisons were made between the edit and imputation specifications for the 1990 census and Census 2000 for the questions on place of birth and Hispanic origin to determine what impact, if any, such differences might have had on comparisons of numbers between the censuses. There were few significant differences in the specifications for the question on place of birth. The most significant difference - “hot deck” imputation of specific countries of birth in Census 2000 but not in 1990 - did not affect the overall total of foreign-born people. Regarding the specifications for the Hispanic question, several important differences were noted, the most important of which was the use of surname-assisted “hot decks” in assigning an origin. Overall, the Census 2000 edit and imputation procedures seemed to be more accurate than the 1990 procedures in assigning an origin. The improvement in assigning an origin was assisted by a substantial decline between 1990 and 2000 in the level of nonresponse to the question on Hispanic origin.

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Consistency of Edit and Imputation Procedures for the Place of Birth and Hispanic Origin Questions: 1990 and 2000

I. Introduction

The purpose of the Task 11 Team as to answer the following question: “How do edit and imputation procedures affect the consistency of foreign-born and Hispanic populations’ data?” We analyzed the edit and imputation procedures from the 1990 census and Census 2000 to answer this question.

II. Executive Summary

- A. Foreign-Born Population – A comparison of the key differences between the 1990 census and Census 2000 edit specifications for the place of birth question reveals one significant difference. (See Table A.) In 1990, 808,158 people who were imputed as foreign born were not assigned a specific country of birth. Instead, these people were assigned the generic code for “Country of birth not reported.” By contrast, people imputed as foreign born in Census 2000 will be assigned a specific country of birth. **While this difference does not have an impact on the total foreign-born population, it has a significant impact on comparisons of country of birth totals between 1990 and 2000.**

Task Team 5 is investigating how people in the “country of birth not reported category” in 1990 were allocated after the fact to a specific country of birth for the purpose of developing population estimates. Other differences in the edit and imputation procedures do not appear to be of sufficient magnitude to warrant further quantitative analysis.

- B. Hispanic Population – Comparison of the 100-percent edit and imputation procedures for the 1990 Census and Census 2000 reveals differences between the two procedures. (See

Table A.) In general, the 1990 procedures were not as rigorous as the Census 2000 procedures in assigning an origin. One significant difference between the two procedures specifications is the use of surname-assisted hot decks in Census 2000.

An extremely important context for understanding the impact of these differences is the fact that the number of allocations for the origin question dropped by 34 percent between 1990 and 2000. This translated into a drop from 25.5 million allocations in 1990 to 16.8 million allocations in 2000. In addition to the drop in overall allocations, there was a fundamental shift in the type of allocation made. In 1990, 75.6 percent of allocations occurred through the “hot deck” (nearest neighbor) method. By contrast, only 41.2 percent of allocations required hot deck allocation in Census 2000. This is an important point, because of the techniques used (imputation based on other information provided by the respondent, allocation from other household members, and hot deck allocation), hot deck allocation is the least reliable. We can attribute this improvement, in large part, to moving the question on origin before the question on race.

There is strong evidence that the less restrictive 1990 edit and imputation procedures and greater reliance on hot deck allocation, combined with a much higher level of nonresponse to the Hispanic origin question in 1990, may have resulted in “over-editing” at least 161,000 people as Hispanic. Although we did not attempt to run the Census 2000 edit and imputation program on 1990 data, we believe the Census 2000 would have imputed fewer people as Hispanic than did the 1990 program.

III. Philosophy of Edit and Imputation Procedures¹

In any imputation scheme, imputed values may differ (sometimes significantly) from what would have been obtained had the information been reported by the respondent. Edit and imputation techniques are designed to make the best possible estimate of the probable response given the best information available. For example, if the respondent did not provide an origin, the procedure first checked to determine if the person indicated that he (or she) was Hispanic in the question on race (close to half of Hispanics provided an Hispanic ethnicity in the race question). If an origin could not be obtained from race, then the procedures attempted to allocate an origin from other people in the household (according to a hierarchy of household relationship) under the assumption that people living in the same household would tend to have the same origin. If an origin could not be obtained from within the household, as a last resort, an origin was assigned by hot deck allocation under the assumption that people of the same origin tend to live in close proximity to each other. To the extent that these assumptions do not hold for a given person or household, allocated values might differ from what would have been obtained had the information been obtained directly from the respondent.

Edit and imputation procedures attempt to rely as much as possible on sources of information about which there is the most confidence (other information provided by the respondent or responses of other household members) and to rely less on last resort procedures such as hot

¹ In this report, “edit” refers to revising or imputing a response based on information provided by the respondent himself or herself. “Imputation,” also used interchangeably with the term “allocation,” refers to imputing a response based on the response of other people in the same household or the response of people in neighboring households.

deck allocation. Even with hot decks, efforts are made to improve the accuracy of allocation by matching donors and donees according to one or more key characteristics. For example, in the 1990 census, origin hot decks used race as a matching variable for donors and donees. In contrast, Census 2000 used not only race, but also age and whether the surname was Spanish or not Spanish, as matching variables. We believe these additional variables improved the accuracy of origin allocation from the hot deck.

IV. Comparison of Edit and Imputation Procedures for Place of Birth

Table A provides a summary of the differences between the 1990 and the Census 2000 edit and imputation procedures for the question on place of birth. An analysis of the differences noted indicates that none of the changes should have significantly affected comparisons in the overall number of native and foreign-born people between 1990 and 2000. The following changes were deemed to have had only a minor impact (if any) on the totals:

A. Changes to the hot deck

The age/race/Hispanic controls for the hot deck were revised for the two main hot decks by combining race and Hispanic categories (Hispanic; non-Hispanic White; non-Hispanic Black; non-Hispanic Asian; non-Hispanic Other) rather than a cross tabulation of race and Hispanic origin (Hispanic White; Hispanic Black; Hispanic Other; non-Hispanic White; non-Hispanic Black; non-Hispanic Other). In addition, more hot decks with limited universes (e.g. Puerto Rico and outlying areas only) were used.

B. Separate procedures for group quarters (GQ)

The 1990 edit and imputation procedures included the GQ population within the same edit and imputation procedures as those used for the household population. First, the portion of the procedures that attempted to assign a state or country of birth from other information provided by the respondent was imbedded within the procedures used for the household population. Furthermore, people in GQ's needing a state or country of birth from the hot deck obtained one from the same hot deck as that used by the rest of the population. By contrast in Census 2000, the portion of the procedures that attempted to assign a state or country of birth was entirely separate from that for the household population. Furthermore, the Census 2000 procedures use separate hot decks for the GQ population controlled by age and 6 GQ types (correctional institutions, nursing homes, college quarters, military quarters, other institutions, and all other GQ's).

C. Availability of information for adopted children

The 1990 edit and imputation procedures distinguished between "natural born or adopted sons or daughters" and "stepsons/stepdaughters" in assigning a state or country of birth. The Census 2000 procedures combined these categories into one category "son/daughter" in attempting to assign a state or country of birth.

While these changes reflect an attempt to provide a more precise allocation of state or country of birth, they do not appear to be of sufficient importance to affect adversely comparisons of levels of foreign born compared with natives between the two censuses. It is unclear, however, how differences between the edit and imputation procedures may have affected comparisons between specific states or countries of birth for the two censuses. We will need to evaluate these issues when we obtain the long form data in Spring 2002.

The use of a native or foreign-born check box in the question may have had some impact for prompting people to report a place of birth. However, because the question relies primarily on a write-in entry for appropriate classification as native or foreign born (in fact, the write-in entry takes precedence over the check box), it is not clear that we would have obtained different results because of the check box categories. The check box categories played a role in the edit and imputation procedures when no write-in response was provided, but this role was a rather limited one. When there was no write-in response, a citizenship response, in some instances, was actually given higher weight in assigning a place of birth than the check box response.

The most important difference between the 1990 and 2000 edit and imputation procedures was in the assignment of a specific country of birth for people not reporting a place of birth who were assigned as foreign born. In 1990, people who were assigned as foreign born were not assigned a specific country of birth. Instead, these people were classified as “Area not reported.” By contrast, the edit and imputation procedures for Census 2000 will assign a specific country of birth. While this difference does not affect comparisons of the total

foreign born between the two censuses, it does affect any comparison by country of birth. In fact, we had to distribute the “Area not reported” population among countries of birth for intercensal estimates that required detailed country of birth data. Another DAPE task team is analyzing how these distributions were made and will not be discussed further in this report.²

The allocation rate for the place of birth question in 1990 was 5.4 percent. By contrast, the rate for Census 2000 was 9.0 percent.³ The difference in the level of nonresponse between the two censuses can be explained partially by the fact that the 1990 census had a content edit follow-up operation that attempted to obtain answers from census forms that had more than a pre-specified threshold of questions with no answers. Census 2000 did not implement a content edit follow-up operation. The increased level of nonresponse, however, does not necessarily imply that comparisons of data on specific countries of birth between 1990 and 2000 would be adversely affected, especially given the improvements in Census 2000 edit and imputation procedures and the fact that specific country of birth was not assigned in the 1990 census procedures.

² This issue is one of the topics being analyzed by Task Team 5.

³ This percent is based on a file containing the results of automated coding (excluding any manual coding) of place of birth responses and using modified editing and weighting procedures to obtain a preliminary estimate of the native and foreign born populations. Official sample data will be available in Spring 2002.

V. Comparison of Edit and Imputation Procedures for Hispanic Origin

A. Summary of Differences

Table A summarizes the key differences between the edit and imputation procedures for the Hispanic origin question in 1990 and 2000. First, while multiple responses were not allowed in either census, Census 2000 allowed for the data capture of more than one response and the edit and imputation procedures assigned one origin. In the case of multiple non-Hispanic or multiple Hispanic responses, a respondent remained non-Hispanic or Hispanic, respectively. However, in the case of a conflicting Hispanic/non-Hispanic response, an attempt was made to resolve this conflict by using other information provided by the respondent (for example, an Hispanic response in the race question), responses of other people in the household, or people living near by who are of the same race.

Census 2000 edit and imputation procedures also differed from the 1990 procedures in how origin could be assigned from other people in the household. In 1990, anyone in the household could donate an origin regardless of their race. By contrast, Census 2000 rules only allowed other household members to “donate” an origin if the person needing an origin and the donor had the same race.

One of the most important differences between the two procedures was how “hot deck” allocation was implemented.⁴ In 1990, hot deck values were stored and assigned by the race of the “donor” and “donee.” In Census 2000, the hot decks also were controlled by the race of the donor. However, Census 2000 hot decks also were controlled by four broad age groups.

More importantly, Census 2000 origin hot decks were further differentiated by whether the donor (and donee) had a Spanish or non-Spanish surname. Use of surname in storing and assigning an origin was one of the most important innovations implemented in Census 2000 in that it allowed a much more precise method for assigning an origin from a hot deck. This innovation was cited in a recent evaluation of having a “profound” impact on the assignment of origin.⁵

Finally, if both race and Hispanic origin were not reported, the edit attempted to assign both a race and an origin from another donor (both within household imputation and hot deck allocation). The 1990 procedures assigned race and origin independently of each other, thus increasing the possibility of creating race/origin combinations that were not that common in the population.

⁴ “Hot deck” allocation involves the assignment of values from a set of stored values that are constantly updated as each person’s data record is processed. A hot deck is usually the procedure of last resort when a value cannot be assigned either from information provided by the person or from other people in the household. In the case of race and origin, hot deck imputation is used most often when there no one in the household has provided a response to a particular question.

⁵ Summary provided by Yves Thibbaudeau, Statistical Research Division, March 31, 1999 concerning evaluation of editing of origin in the 1998 Census Dress Rehearsal.

B. Context for Comparing Edit and Imputation Procedures

Before assessing the impact of these differences on the Hispanic origin population, it is important to understand the differing contexts within which each edit operated. One of the hallmarks of the Hispanic origin question in 1990 was the relatively high level of nonresponse. Table 1 compares the allocation rates⁶ for Census 2000 and the 1990 census. It is clear from this table that the allocation rate for this question was almost twice as high in 1990 as it was in 2000 (10.4 percent versus 5.6 percent). What is striking is that the range of allocation rates by region narrowed considerably from 1990 to 2000. In 1990, the rates ranged from 7.2 percent in the West to 11.8 percent in the Northeast – a difference of 4.6 percentage points. Among states and the District of Columbia, the range was even wider with Idaho having the lowest percent (4.2 percent) and the District of Columbia having the highest (18.3 percent) – a difference of 14.1 percentage points. In Census 2000, by contrast, the range by region was much narrower, with the Midwest having the lowest rate (4.7 percent) and the South having the highest rate (6.0 percent) – a difference of only 1.3 percentage points. By state, Minnesota had the lowest rate in Census 2000 (4.0 percent), while the District of Columbia had the highest rate (11.0 percent) – a difference of 7.0 percentage points. It is clear that the biggest improvement in these rates occurred for states that had high allocation rates in 1990. This dramatic improvement in response can be attributed in large part to the placement of the Hispanic question before the question on race in Census 2000.

⁶ Allocation rates represent the rate at which responses were imputed based on responses of others within the household or from people living nearby (also called “hot deck” imputation).

Tables 2-7 show the impact of the higher level of nonresponse to the origin question in the 1990 census.⁷ Table 2 shows that at the national level, hot deck allocation was the largest source of origin response after “reported origin.” This means that for a significant proportion of the population (8.5 percent), no one in the household answered the Hispanic origin question. This relationship held for all states.

Table 3 shows that for the 1990 Hispanic population alone, there was about equal reliance on “within household” and “hot deck” allocation, with some regions and states having a higher proportion of within-household allocation. This is not surprising since the question is primarily oriented to the Hispanic population. Table 4, by contrast, shows that for non-Hispanics, the proportion of responses coming from hot deck allocation was much higher than that from within household allocation. Tables 5-7 show the distribution of allocated responses by source of allocation and support the same conclusions but from a slightly different perspective.

One of the most important changes made to the Hispanic origin question in Census 2000 to address the problem of nonresponse was to shift the order of the Hispanic origin and race questions. In the 1990 census, the race question appeared first and the Hispanic origin question appeared several questions later. It seems clear that after answering the question on race, many people felt that the Hispanic origin question did not apply and simply skipped the question. Shifting the order of the questions in tests conducted before

⁷ The universe for these tables is the population in housing units and excludes the population in group quarters.

Census 2000 seemed to improve overall response to the Hispanic origin question with some increased nonresponse to the question on race.

Table 1 and Tables 8-13 show very clearly that not only the level of nonresponse was reduced but also that the relative contribution of within household and hot deck allocation was much more balanced for non-Hispanics in Census 2000 than in the 1990 census.

More importantly, allocation from surname-assisted hot decks overall was greater than allocation from non-surname-assisted hot decks (Tables 8-10). Table 10, in particular, shows that for non-Hispanics, allocation from surname-assisted hot decks was about three times the level of allocation from non-surname assisted hot decks (2.0 percent compared to 0.6 percent).

The impact of surname-assisted programs is clearly more dramatic when observing the source of allocations in Tables 11-13. Overall, surname-assisted hot decks represented 31.4 percent of all allocations, while non-surname assisted hot decks accounted for only 9.6 percent of all allocations. For Hispanic allocations, surname-assisted hot decks overall represented 8.1 percent of all allocations while non-surname assisted hot decks represented about 4.0 percent. For non-Hispanics, surname assisted hot decks provided 36.9 percent of all allocations, while non-surname assisted hot decks provided only 10.9 percent of all allocations (Table 13). In some states where the proportion of Hispanics is very low (such as Alabama, Georgia, Mississippi, North Carolina, South Carolina, and West Virginia), the proportion of people receiving an origin from a surname-assisted hot

deck is five times the proportion receiving an origin from a non-surname assisted hot deck.

It is clear from Tables 2-13 that there was a significant increase in Census 2000 in the level of substitution, from 0.7 percent of the population in households in 1990 to 1.2 percent of the total population in Census 2000 (Tables 2 and 8). Substitution occurs when there are no data for anyone in the housing unit, and we use data from a neighboring household of similar size, using the hot deck method, to allocate characteristics for the people in that housing unit. Given that the same basic method was used in both censuses, there is no reason to believe that the procedure itself created any upward or downward bias in assigning origin in 1990 and 2000.

Tables 9 and 10 show that the percent substituted is slightly higher for the Hispanic population (1.6 percent) than for the non-Hispanic population (1.2 percent). There was a similar pattern in 1990, however, but at a lower level. Tables 3 and 4 show that in 1990 the percent substituted for the Hispanic population (0.9 percent) was again slightly higher than that for the non-Hispanic population (0.6 percent). In addition, it is also clear that substitution played a much larger role in the source of allocation of origin in 2000, with substitution constituting about 20 percent of allocations overall. Interestingly, as shown in Tables 12 and 13, the share of substitution was higher for the non-Hispanic population (21.1 percent) than for the Hispanic population (17.5 percent). By contrast, Tables 6 and 7 show that in 1990 the share of substitution in total allocations was much higher for

Hispanics (11.0 percent) than for non-Hispanics (5.9 percent). The reasons for the increase in substitution will be part of the Census Bureau's evaluation of Census 2000.

Finally, to put all these results in a broader perspective by including the results from the Census 2000 Supplemental Survey (C2SS), Tables 14-16 show that the trend toward improved response to the origin question is continuing. Editing procedures were basically the same for Census 2000 and the C2SS, except that there was no substitution in the C2SS. Table 14, in particular, shows that allocation rates are lower for the total population and for the Hispanic and non-Hispanic populations in the C2SS than in Census 2000 and in 1990. Table 15 shows an even greater reliance on surname assisted hot decks in the C2SS, with Table 16 showing a much greater reliance on surname assisted hot decks for the non-Hispanic population than for the Hispanic population. It should be noted, however, that the level of response in C2SS was improved through the use of field follow-up procedures for people who did not fully answer the questions on the questionnaire, a procedure that was not used in Census 2000.

C. Impact of Editing on Hispanic Origin Population in 1990

In the 1990 census, there was an unusually high level of dependence on hot deck allocation because many of the people needing an imputed origin had no reported origin for anyone in the household. This greater reliance on hot deck allocation, combined with a relatively high level of nonresponse, meant that most allocations came from the hot deck, especially for the non-Hispanic population. For example, 75.6 percent of non-

Hispanic allocations came from a hot deck, excluding substitutions. By contrast, only 29.9 percent of Hispanic allocations came from a hot deck (Tables 5 and 6), again excluding substitutions. This reflects the fact that the 1990 census hot decks matched donors and donees by their race, but did not match by age and by whether the donee had a Spanish or non-Spanish surname as did Census 2000 origin hot decks.

Concerns about the impact of 1990 edit and imputation procedures emerged when the results of the sample data processing, including a separate edit and imputation for sample questionnaires, became available. The Hispanic origin question on the sample form was edited in sample processing independent of the 100-percent edit and imputation program. Although the basic structure of the two procedures were the same, the edit and imputation procedures for the Hispanic origin question during sample processing differed in a very important way from those used in 100-percent processing. Unlike the 100-percent procedures, sample procedures made use of the rich source of ethnic-related questions from the sample form (ancestry, place of birth, language spoken at home) that could assist in imputing for nonresponse. The use of ethnic-related information, combined with a higher response rate for the Hispanic origin question on the sample form, meant a much lower dependence on hot deck allocation.

The estimate of the Hispanic origin population that resulted from sample processing was about 454,000 below the total of Hispanics obtained from 100-percent processing with the 100-percent total exceeding the sample estimate for most states. This difference

existed despite the fact that sample estimates were controlled to 100-percent totals, including race and Hispanic origin.⁸

Thompson (1991) addressed this difference and the difference between 100-percent totals and sample estimates for the American Indian population. He noted that the difference for the Hispanic population could be attributed to three factors: 1) weighting procedures; 2) a form of allocation bias; and 3) sample processing. Thompson attributed the difference between 100-percent totals and sample estimates primarily to undersampling of Hispanics and to a form of allocation bias. He also attributed part of the difference to different data processing procedures.⁹ His analysis, however, did not quantify how much each factor contributed to this difference.

The “allocation bias” to which Thompson’s analysis refers is directly related to the focus of this analysis. Thompson noted that the nonresponse for the Hispanic question on the short form was 10 percent while the nonresponse rate for the same question on the sample form was only 4 percent. This difference was due partly to the fact that during data collection all sample forms were subject to content edit follow-up (field follow-up of

⁸ Although efforts are made to control the weighting by race and Hispanic origin in each weighting area, there is no guarantee that these weighting control totals can be maintained in each area because each control total in the weighting matrix had to meet a certain minimum threshold. Those totals not meeting the threshold were merged with other totals according to a pre-determined collapsing sequence.

⁹ In 1990 processing for the Hispanic origin question, only optical marks, but no write-in responses were captured. Thus, people who provided a write-in response but did not fill the “Other Hispanic” circle were treated as a nonresponse in the 100-percent edit and could have been assigned either as Hispanic or not Hispanic. People who provided a write-in response and marked the “Other Spanish/Hispanic” circle would have been identified as “Other Spanish/Hispanic” in the 100-percent edit and then either as Hispanic or not Hispanic in the sample edit depending on whether the write-in response was Hispanic or not Hispanic in sample coding operations.

cases where the number of non-reported items exceeded a certain threshold). By contrast, only 10 percent of short forms were subject to content edit follow-up.

Thompson reasoned that Hispanics were more likely to answer the Hispanic origin question than were non-Hispanics, making the donor pool more heavily Hispanic than it would have been had both Hispanics and non-Hispanics reported. If the nonresponse rate for the Hispanic question was high, there was an increased risk that an Hispanic origin would be disproportionately assigned. Evidence of this comes from Del Pinal (1994) who noted that the 1990 edit and imputation procedures tended to increase the overlap between various racial groups and the Hispanic population. For example, although there were very few Black Mexican origin persons, about 62 percent of Black Mexicans were created by the edit and imputation procedures.¹⁰ Not surprisingly, the Black population had a much higher nonresponse rate (18.4 percent) in the Hispanic origin question than did the White population (9.6 percent). (See Table 17.) The corresponding nonresponse rates for American Indians and Alaska Natives and Asians and Pacific Islanders were 10.2 percent and 9.7 percent, respectively. All these rates were still much higher than the nonresponse rates for other 100-percent questions such as race, age, gender and household relationship – all of which had nonresponse rates below 3 percent – and increased the possibility of a misallocation of respondents as Hispanic. To give a sense of the potential impact on the data, a net misallocation of only 0.1 percent of

¹⁰ The percentages and rates in this paragraph were derived from special 1990 files containing only household records and excludes records from the group quarters population (such as college dorms, prisons, military bases, and nursing homes).

nonresponses as Hispanic out of a total of 24 million needing an origin would result in a net increase of 240,000 Hispanics.

To attempt to quantify at some minimal level the impact of the potential misallocation of responses as Hispanic, we obtained records from the sample edited detailed file (SEDF) for 1990. On these records, we had not only the origin value from sample processing (along with its allocation flag to indicate whether the value was reported or imputed) but also the origin value from 100-percent processing along with its corresponding allocation flag. In particular, we were interested in determining how people who received an allocated origin in the 100-percent edit had their origin allocated in the sample edit. For the purposes of this analysis, the results of the sample edit are considered the standard for accuracy because sample editing procedures made use of data from additional ethnic-related questions (ancestry, place of birth, and language spoken at home) not available on the short form.

Table 18 shows that, overall, the 100-percent edit produced a net of about 181,000 more Hispanics than did the sample edit when origin was allocated both in 100-percent and sample editing procedures. This net difference in edit outcomes represented only 2.1 percent of the 8.6 million people for whom origin was allocated in both 100-percent and sample processing.

If we take into consideration also the situations in which we imputed a value in the 100-percent procedures but did not impute a value in the sample procedures, the 100-percent edit produced a net overall of about 161,000 more Hispanics than did the sample procedures.¹¹ Assuming that the sample edit and imputation process is more accurate, the 100-percent edit appears to have imputed as Hispanic a net total of 161,000 people who were probably not Hispanic. However, this number represents only 1.8 percent of all people whose origin was imputed. It is also important to keep in mind that both edit procedures agreed on the edit outcome 96 percent of the time.

It is clear from this table that the impact of this potential misallocation is different by race. The apparent degree of over-editing of Hispanics (as measured by taking the ratio of “Hispanic-100%; Not Hispanic – Sample” to “Not Hispanic – 100%; Hispanic – Sample”) appeared to be much greater for Blacks (10.0) and Asian and Pacific Islanders (13.1) than for Whites (4.4). Analysis of the unweighted data shows the same pattern, but slightly lower ratios for each group. This finding is consistent with Del Pinal’s finding that certain race/Hispanic combinations were more significantly affected by the editing procedures.

¹¹ This was possible because we only captured optical marks in the 100-percent data processing and a person could have written in a response without marking any circles. Although the write-in entry could have been either an Hispanic or a non-Hispanic entry, most of the time the entry was Hispanic.

It is important to keep in mind that the estimate of 161,000 is probably a lower bound because these data were obtained from sample forms that had a lower nonresponse rate and had much more ethnic-related information than did short form questionnaires. It is possible that the level of misallocation would be higher among the population that received only the short form, which experienced a higher nonresponse rate for origin than did the sample form. However, it is unlikely that the upper bound would be as high as the difference between the 100-percent and sample totals (454,000) because: 1) sample processing changed about 262,000 responses from “Other Spanish/Hispanic” to not Hispanic¹² and 2) to an unknown degree there was undersampling of Hispanics for which the sample weighting procedures did not compensate.

It is also very important to keep in mind that the impact on the overall total Hispanic population was very small. Overall, this net difference (161,000) represented only 0.7 percent of the total Hispanic population.

D. Impact of Edit and Imputation Procedures on Hispanic Origin Population in Census 2000

There are no comparable data available at this time from Census 2000 to perform the same type of analysis that was conducted on the 1990 census edit and imputation procedures. However, it is very clear that the Census 2000 procedures operated in an environment that was profoundly different from that in which the 1990 procedures operated. Significantly reduced nonresponse to the question, combined with more restrictions on the conditions under which origin could be assigned to an individual,

¹² Based on the fact that the respondent provided a non-Hispanic response in the write-in space.

probably has led to much lower level of erroneous imputations as Hispanic (or non-Hispanic).¹³ At the same time, innovations, such as the surname-assisted hot deck, has improved the accuracy and, therefore, the quality of data from the Hispanic origin question.

¹³ Another example of this is how we handled situations in which a respondent indicated that he or she was Hispanic and non-Hispanic. This situation occurred about 700,000 times nationally. Instead of simply assuming that all such people should be Hispanic, we looked at information provided by the respondent (such as the reporting of an Hispanic origin in race), information provided by others in the household, and ultimately by the hot deck, to adjudicate these situations. As it turned out, about half of the people were assigned as Hispanic and half were assigned as not Hispanic.

VI. Conclusion

From the information provided above we have come to the following conclusions:

1. There is no evidence based on a comparison of edit and imputation procedures from Census 2000 and the 1990 census for the place of birth question to conclude that differences in the procedures would have explained differences in the overall total of the foreign born population in 2000 and in 1990. There were some changes in the edit and imputation procedures between the two censuses, but none of these would have had any significant impact on the overall total of the foreign born.
2. There were some significant differences in the edit and imputation procedures between the two censuses for the Hispanic origin question. The most important of these was the use of surname-assisted hot decks in Census 2000. These hot decks allowed for much greater precision in assigning an origin from neighboring housing units when no one in the household answered the question. Furthermore, there was a dramatic improvement in response to the Hispanic question in Census 2000, thus reducing the need (relative to 1990) for providing a response through edit and imputation procedures. In fact, there is evidence from 1990 that the combination of higher nonresponse, greater use of hot deck procedures, and lack of the benefit of surname-assisted hot deck procedures (surname capture was not done in 1990 for all census forms) led to some over-editing of people as Hispanic.

We will continue our analysis of the quality of Census 2000 origin data as sample data and data from other evaluation studies become available.

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VIII. Table A and Detailed Tables

Table 1. Total Allocation Rates for the Hispanic Question for the United States, Regions, and States: 1990 and 2000.

Source: U.S. Census Bureau
Internet Release date: July 1, 2002

Geographic area	State by region	Census 1990			Census 2000		
		Total	Hispanic 1/	Non-Hispanic	Total	Hispanic	Non-Hispanic
United States 2,3,4,5/		10.4	6.1	10.8	5.6	6.3	5.5
Region							
Northeast.....	(NE)	11.6	7.1	11.7	5.8	7.3	5.7
Midwest.....	(MW)	10.6	9.9	10.8	4.7	5.9	4.6
South.....	(S)	11.5	5.5	12.0	6.0	6.0	6.0
West.....	(W)	7.2	4.8	7.8	5.8	6.2	5.7
State							
Alabama.....	S	12.3	11.4	12.3	6.9	8.1	6.9
Alaska.....	W	4.6	5.4	4.5	5.5	4.7	5.5
Arizona.....	W	7.0	4.3	7.6	6.3	6.3	6.2
Arkansas.....	S	6.6	6.9	6.6	5.5	5.9	5.5
California.....	W	7.2	4.7	8.0	6.1	6.2	6.0
Colorado.....	W	7.4	5.6	7.7	5.2	6.1	5.1
Connecticut.....	NE	12.2	10.1	12.3	4.8	5.6	4.8
Delaware.....	S	9.7	9.0	9.7	7.0	8.2	6.9
District of Columbia.....	S	18.3	11.7	18.6	11.0	8.1	11.2
Florida.....	S	10.7	8.2	11.0	5.7	6.0	5.7
Georgia.....	S	13.7	9.6	13.8	6.9	7.5	6.9
Hawaii.....	W	8.2	8.4	8.2	7.7	6.2	7.8
Idaho.....	W	4.2	3.2	4.3	4.3	4.9	4.2
Illinois.....	MW	11.9	6.5	12.3	5.8	6.4	5.7
Indiana.....	MW	11.1	8.0	11.2	5.2	6.5	5.1
Iowa.....	MW	10.1	8.5	10.1	3.5	4.8	3.4
Kansas.....	MW	8.0	6.0	8.1	4.1	4.6	4.0
Kentucky.....	S	13.7	12.2	13.7	4.9	6.5	4.9
Louisiana.....	S	14.4	13.6	14.4	6.4	7.3	6.4
Maine.....	NE	7.4	9.0	7.4	4.1	6.5	4.0
Maryland.....	S	12.2	9.4	12.3	6.6	7.4	6.5
Massachusetts.....	NE	11.8	9.9	11.9	5.2	6.5	5.1
Michigan.....	MW	11.2	8.4	11.3	4.9	5.3	4.9
Minnesota.....	MW	9.0	8.4	9.0	4.0	5.8	4.0
Mississippi.....	S	15.2	14.6	15.2	7.0	8.7	7.0
Missouri.....	MW	11.5	8.9	11.5	4.4	5.5	4.4
Montana.....	W	4.8	4.7	4.8	4.7	5.9	4.6
Nebraska.....	MW	8.1	6.7	8.1	3.5	4.5	3.4
Nevada.....	W	9.0	6.7	9.3	6.5	6.3	6.5
New Hampshire.....	NE	8.6	8.8	8.6	4.8	7.1	4.8
New Jersey.....	NE	11.6	10.3	11.7	5.6	6.5	5.4
New Mexico.....	W	6.0	4.7	6.9	6.4	6.3	6.4
New York.....	NE	11.4	9.9	11.7	7.1	8.1	6.9
North Carolina.....	S	13.9	10.0	13.9	5.7	6.1	5.6
North Dakota.....	MW	6.1	5.5	6.1	3.6	5.3	3.6
Ohio.....	MW	10.9	8.6	10.9	4.3	5.1	4.3
Oklahoma.....	S	9.5	6.6	9.6	4.8	4.3	4.8
Oregon.....	W	8.2	5.7	8.3	4.5	5.3	4.5
Pennsylvania.....	NE	12.3	8.2	12.4	4.9	5.7	4.9
Rhode Island.....	NE	14.7	14.6	14.7	6.2	8.9	5.9
South Carolina.....	S	13.7	11.6	13.8	6.6	7.3	6.6
South Dakota.....	MW	7.4	7.4	7.4	4.1	5.6	4.1
Tennessee.....	S	12.3	11.2	12.3	5.4	6.5	5.4
Texas.....	S	7.9	3.6	9.4	5.9	5.8	6.0
Utah.....	W	7.3	6.2	7.4	4.2	5.5	4.1
Vermont.....	NE	4.3	5.6	4.3	4.9	7.2	4.8
Virginia.....	S	12.0	8.2	12.1	5.5	6.1	5.5
Washington.....	W	7.8	5.5	7.9	5.4	6.0	5.4
West Virginia.....	S	12.4	14.5	12.4	4.6	7.6	4.6
Wisconsin.....	MW	9.7	6.7	9.7	4.6	5.8	4.5
Wyoming.....	W	5.0	5.0	5.0	5.3	5.4	5.3

Source: U.S. Bureau of the Census, 2000 Census; 1990 Census.

NOTES:

- 1/ Hispanics may be of any race.
- 2/ Puerto Rico is not included in this table.
- 3/ For Census 2000, housing unit population and group quarters population are included.
- 4/ For Census 1990, housing unit population only.
- 5/ Total Allocation rates do not include pre-edit procedures such as obtaining Hispanic origin from multiple ethnic origin or from the race question.

Table 2. Total Household Population for the Hispanic Origin Question by Allocation Status and Type of Allocation Flag for the United States, Regions, and States: 1990.

Source: U.S. Census Bureau
Internet Release date: July 1, 2002

Geographic area	State by region	Total household population	Percent distribution by flag type 1/					
			Total	Not allocated		Allocated		
				Reported origin	From race	Within household	Hot deck	Substitution
United States 2,3/		242,012,129	100.0	89.5	0.2	1.8	8.0	0.7
Region								
Northeast.....	(NE)	49,299,141	100.0	88.2	0.3	2.0	8.8	0.8
Midwest.....	(MW)	58,070,012	100.0	89.3	0.0	1.6	8.5	0.5
South.....	(S)	83,151,510	100.0	88.5	0.1	1.7	9.1	0.7
West.....	(W)	51,491,466	100.0	92.5	0.3	1.7	4.8	0.7
State								
Alabama.....	S	3,948,185	100.0	87.7	0.0	1.6	10.1	0.7
Alaska.....	W	529,342	100.0	95.4	0.0	1.2	2.9	0.5
Arizona.....	W	3,584,545	100.0	92.8	0.2	1.5	4.4	1.0
Arkansas.....	S	2,292,393	100.0	93.4	0.0	1.0	5.2	0.4
California.....	W	29,008,161	100.0	92.4	0.4	1.9	4.6	0.7
Colorado.....	W	3,214,922	100.0	92.4	0.2	1.5	5.1	0.9
Connecticut.....	NE	3,185,949	100.0	87.7	0.2	2.2	8.7	1.2
Delaware.....	S	646,097	100.0	90.3	0.0	1.7	6.8	1.2
District of Columbia.....	S	565,183	100.0	81.3	0.4	2.3	13.5	2.4
Florida.....	S	12,630,465	100.0	89.2	0.1	1.9	7.9	0.9
Georgia.....	S	6,304,583	100.0	86.2	0.0	1.8	11.3	0.6
Hawaii.....	W	1,070,597	100.0	91.7	0.1	2.0	5.3	1.0
Idaho.....	W	985,259	100.0	95.8	0.0	1.0	2.8	0.4
Illinois.....	MW	11,143,646	100.0	88.0	0.1	1.7	9.3	0.9
Indiana.....	MW	5,382,167	100.0	88.9	0.0	1.6	9.1	0.5
Iowa.....	MW	2,677,235	100.0	89.9	0.0	1.5	8.3	0.3
Kansas.....	MW	2,394,809	100.0	91.9	0.0	1.3	6.2	0.5
Kentucky.....	S	3,584,120	100.0	86.3	0.0	1.5	11.8	0.4
Louisiana.....	S	4,107,395	100.0	85.6	0.0	1.9	11.8	0.7
Maine.....	NE	1,190,759	100.0	92.6	0.0	1.2	5.7	0.5
Maryland.....	S	4,667,612	100.0	87.7	0.1	2.0	9.4	0.8
Massachusetts.....	NE	5,802,118	100.0	88.1	0.1	2.1	8.8	0.9
Michigan.....	MW	9,083,605	100.0	88.8	0.0	1.9	8.9	0.4
Minnesota.....	MW	4,257,478	100.0	91.0	0.0	1.6	7.1	0.4
Mississippi.....	S	2,503,499	100.0	84.8	0.0	1.7	12.9	0.5
Missouri.....	MW	4,971,676	100.0	88.5	0.0	1.5	9.6	0.3
Montana.....	W	775,318	100.0	95.2	0.0	1.0	3.4	0.4
Nebraska.....	MW	1,530,832	100.0	91.9	0.0	1.4	6.5	0.3
Nevada.....	W	1,177,633	100.0	90.8	0.1	1.8	6.8	0.5
New Hampshire.....	NE	1,077,101	100.0	91.4	0.0	1.4	6.5	0.7
New Jersey.....	NE	7,558,820	100.0	88.1	0.3	2.2	8.4	1.0
New Mexico.....	W	1,486,262	100.0	93.4	0.6	1.6	3.4	1.1
New York.....	NE	17,445,190	100.0	88.1	0.5	2.2	8.5	0.8
North Carolina.....	S	6,404,167	100.0	86.1	0.0	1.5	11.9	0.5
North Dakota.....	MW	614,566	100.0	93.9	0.0	1.0	4.9	0.3
Ohio.....	MW	10,585,664	100.0	89.1	0.0	1.7	8.9	0.4
Oklahoma.....	S	3,051,908	100.0	90.5	0.0	1.6	7.4	0.6
Oregon.....	W	2,776,116	100.0	91.8	0.0	1.5	6.3	0.3
Pennsylvania.....	NE	11,533,219	100.0	87.6	0.0	1.7	10.1	0.5
Rhode Island.....	NE	964,869	100.0	85.1	0.3	2.2	10.7	1.8
South Carolina.....	S	3,370,160	100.0	86.3	0.0	1.6	11.3	0.8
South Dakota.....	MW	670,163	100.0	92.6	0.0	1.3	5.5	0.5
Tennessee.....	S	4,748,056	100.0	87.7	0.0	1.5	10.4	0.4
Texas.....	S	16,593,063	100.0	91.8	0.3	1.6	5.6	0.7
Utah.....	W	1,693,802	100.0	92.7	0.1	1.8	5.1	0.4
Vermont.....	NE	541,116	100.0	95.7	0.0	1.0	2.7	0.5
Virginia.....	S	5,978,058	100.0	87.9	0.1	1.7	9.9	0.5
Washington.....	W	4,746,161	100.0	92.1	0.0	1.6	5.8	0.5
West Virginia.....	S	1,756,566	100.0	87.6	0.0	1.4	10.6	0.5
Wisconsin.....	MW	4,758,171	100.0	90.3	0.0	1.6	7.8	0.3
Wyoming.....	W	443,348	100.0	94.9	0.0	1.2	3.1	0.7

Source: U.S. Bureau of the Census, 1990 Census.

NOTES:

1/ Flag type definitions: "Reported origin" means that the respondent reported their origin; "From race" means that an origin was obtained from a write-in response to the question on race; "Within household" means that origin was obtained from someone within the household of the respondent; "Hot deck" means that origin was obtained from another neighboring household using the hot deck procedure; and lastly, "Substitution" means that origin and all other characteristics for everyone in the household were obtained from neighboring households using substitution procedures.

2/ Puerto Rico is not included in this table.

3/ Includes Housing Unit Population only.

Table 3. Total Hispanic Household Population for the Hispanic Origin Question by Allocation Status and Type of Allocation Flag for the United States, Regions, and States: 1990.

Source: U.S. Census Bureau
Internet Release date: July 1, 2002

Geographic area	State by region	Total Hispanic 1/ household population	Percent distribution by flag type 2/					
			Total	Not allocated		Allocated		
				Reported origin	From race	Within household	Hot deck	Substitution
United States 3,4/		21,836,827	100.0	92.2	1.7	2.9	2.3	0.9
Region								
Northeast.....	(NE)	3,637,380	100.0	86.7	3.4	4.3	4.4	1.3
Midwest.....	(MW)	1,688,349	100.0	91.6	1.3	3.2	3.0	1.0
South.....	(S)	6,629,262	100.0	93.4	1.1	2.6	2.2	0.7
West.....	(W)	9,881,836	100.0	93.6	1.6	2.5	1.5	0.8
State								
Alabama.....	S	23,065	100.0	88.2	0.4	5.1	5.7	0.5
Alaska.....	W	16,388	100.0	94.0	0.6	3.1	1.7	0.6
Arizona.....	W	674,314	100.0	94.8	1.0	2.0	1.4	0.9
Arkansas.....	S	19,049	100.0	92.6	0.5	4.1	2.5	0.4
California.....	W	7,520,200	100.0	93.6	1.7	2.5	1.4	0.8
Colorado.....	W	414,887	100.0	93.2	1.2	2.4	2.3	1.0
Connecticut.....	NE	206,017	100.0	87.4	2.5	3.9	3.7	2.5
Delaware.....	S	15,375	100.0	89.6	1.4	3.7	3.4	1.9
District of Columbia.....	S	31,120	100.0	81.2	7.0	4.0	4.1	3.6
Florida.....	S	1,542,290	100.0	90.9	0.9	4.2	3.3	0.7
Georgia.....	S	100,695	100.0	89.1	1.3	4.5	4.3	0.8
Hawaii.....	W	78,524	100.0	91.0	0.7	4.1	3.2	1.0
Idaho.....	W	51,175	100.0	96.4	0.4	1.7	1.1	0.4
Illinois.....	MW	890,189	100.0	91.8	1.7	2.5	2.6	1.4
Indiana.....	MW	95,887	100.0	91.0	1.0	4.0	3.6	0.5
Iowa.....	MW	31,527	100.0	90.9	0.5	4.3	3.9	0.4
Kansas.....	MW	90,547	100.0	93.2	0.8	2.8	2.0	1.1
Kentucky.....	S	19,372	100.0	87.3	0.5	5.3	6.5	0.5
Louisiana.....	S	89,220	100.0	84.6	1.8	5.3	7.2	1.0
Maine.....	NE	6,382	100.0	90.6	0.4	4.7	3.7	0.5
Maryland.....	S	121,976	100.0	87.6	2.9	4.9	3.7	0.8
Massachusetts.....	NE	276,236	100.0	87.3	2.8	3.9	4.1	1.9
Michigan.....	MW	196,383	100.0	90.8	0.8	4.3	3.7	0.4
Minnesota.....	MW	51,993	100.0	90.9	0.7	4.2	3.4	0.8
Mississippi.....	S	15,029	100.0	85.1	0.4	5.3	8.8	0.4
Missouri.....	MW	59,405	100.0	90.5	0.6	4.1	4.2	0.6
Montana.....	W	11,723	100.0	94.8	0.5	2.6	1.8	0.2
Nebraska.....	MW	36,071	100.0	92.6	0.7	3.3	3.2	0.3
Nevada.....	W	122,501	100.0	92.0	1.3	3.4	2.9	0.4
New Hampshire.....	NE	10,816	100.0	90.6	0.6	4.6	3.4	0.7
New Jersey.....	NE	724,081	100.0	86.8	2.9	4.6	4.4	1.3
New Mexico.....	W	570,491	100.0	93.9	1.5	1.8	1.9	1.0
New York.....	NE	2,145,357	100.0	86.2	3.9	4.2	4.5	1.1
North Carolina.....	S	69,840	100.0	89.3	0.8	4.9	4.6	0.5
North Dakota.....	MW	4,414	100.0	94.2	0.3	2.8	2.4	0.4
Ohio.....	MW	136,316	100.0	90.6	0.8	4.2	4.0	0.4
Oklahoma.....	S	83,322	100.0	92.2	1.2	3.7	2.4	0.5
Oregon.....	W	107,273	100.0	93.5	0.8	3.1	2.1	0.5
Pennsylvania.....	NE	220,763	100.0	90.4	1.4	3.6	3.9	0.8
Rhode Island.....	NE	44,459	100.0	79.7	5.7	5.2	6.4	3.0
South Carolina.....	S	27,697	100.0	87.7	0.7	5.4	5.4	0.9
South Dakota.....	MW	5,006	100.0	92.3	0.3	3.8	3.1	0.5
Tennessee.....	S	30,318	100.0	88.2	0.6	5.1	5.7	0.4
Texas.....	S	4,278,707	100.0	95.3	1.1	1.7	1.3	0.6
Utah.....	W	82,151	100.0	92.7	1.1	3.3	2.3	0.5
Vermont.....	NE	3,269	100.0	93.9	0.5	3.2	2.3	0.2
Virginia.....	S	154,196	100.0	89.0	2.8	4.4	3.2	0.6
Washington.....	W	206,978	100.0	93.4	1.0	3.0	1.9	0.6
West Virginia.....	S	7,991	100.0	85.1	0.4	5.3	8.6	0.6
Wisconsin.....	MW	90,611	100.0	92.5	0.8	3.4	2.8	0.5
Wyoming.....	W	25,231	100.0	94.2	0.9	2.5	1.7	0.7

Source: U.S. Bureau of the Census, 1990 Census.

NOTES:

1/ Hispanics may be of any race.

2/ Flag type definitions: "Reported origin" means that the respondent reported their origin; "From race" means that an origin was obtained from a write-in response to the question on race; "Within household" means that origin was obtained from someone within the household of the respondent; "Hot deck" means that origin was obtained from another neighboring household using the hot deck procedure; and lastly, "Substitution" means that origin and all other characteristics for everyone in the household were obtained from neighboring households using substitution procedures.

3/ Puerto Rico is not included in this table.

4/ Includes Housing Unit Population only.

Table 4. Total Non-Hispanic Household Population for the Hispanic Origin Question by Allocation Status and Type of Allocation Flag for the United States, Regions, and States: 1990.

Source: U.S. Census Bureau
Internet Release date: July 1, 2002

Geographic area	State by region	Total Non-Hispanic household population	Percent distribution by flag type 1/				
			Total	Not Allocated	Allocated		
				Reported origin	Within household	Hot deck	Substitution
United States 2,3/		220,175,302	100.0	89.2	1.6	8.5	0.6
Region							
Northeast.....	(NE)	45,661,761	100.0	88.3	1.9	9.1	0.8
Midwest.....	(MW)	56,381,663	100.0	89.2	1.6	8.7	0.5
South.....	(S)	76,522,248	100.0	88.0	1.6	9.7	0.7
West.....	(W)	41,609,630	100.0	92.2	1.6	5.5	0.7
State							
Alabama.....	S	3,925,120	100.0	87.7	1.6	10.1	0.7
Alaska.....	W	512,954	100.0	95.5	1.1	2.9	0.5
Arizona.....	W	2,910,231	100.0	92.4	1.4	5.1	1.1
Arkansas.....	S	2,273,344	100.0	93.4	1.0	5.2	0.4
California.....	W	21,487,961	100.0	92.0	1.7	5.6	0.7
Colorado.....	W	2,800,035	100.0	92.3	1.3	5.5	0.9
Connecticut.....	NE	2,979,932	100.0	87.7	2.1	9.1	1.1
Delaware.....	S	630,722	100.0	90.3	1.7	6.9	1.1
District of Columbia.....	S	534,063	100.0	81.4	2.2	14.0	2.4
Florida.....	S	11,088,175	100.0	89.0	1.6	8.5	0.9
Georgia.....	S	6,203,888	100.0	86.2	1.8	11.4	0.6
Hawaii.....	W	992,073	100.0	91.8	1.8	5.4	1.0
Idaho.....	W	934,084	100.0	95.7	1.0	2.9	0.4
Illinois.....	MW	10,253,457	100.0	87.7	1.7	9.8	0.8
Indiana.....	MW	5,286,280	100.0	88.8	1.5	9.2	0.5
Iowa.....	MW	2,645,708	100.0	89.9	1.5	8.4	0.3
Kansas.....	MW	2,304,262	100.0	91.9	1.2	6.4	0.5
Kentucky.....	S	3,564,748	100.0	86.3	1.5	11.8	0.4
Louisiana.....	S	4,018,175	100.0	85.6	1.8	11.9	0.7
Maine.....	NE	1,184,377	100.0	92.6	1.2	5.7	0.5
Maryland.....	S	4,545,636	100.0	87.7	1.9	9.5	0.8
Massachusetts.....	NE	5,525,882	100.0	88.1	2.0	9.0	0.9
Michigan.....	MW	8,887,222	100.0	88.7	1.8	9.0	0.4
Minnesota.....	MW	4,205,485	100.0	91.0	1.5	7.1	0.4
Mississippi.....	S	2,488,470	100.0	84.8	1.7	13.0	0.5
Missouri.....	MW	4,912,271	100.0	88.5	1.5	9.6	0.3
Montana.....	W	763,595	100.0	95.2	1.0	3.4	0.4
Nebraska.....	MW	1,494,761	100.0	91.9	1.3	6.5	0.3
Nevada.....	W	1,055,132	100.0	90.7	1.6	7.2	0.5
New Hampshire.....	NE	1,066,285	100.0	91.4	1.4	6.5	0.7
New Jersey.....	NE	6,834,739	100.0	88.3	2.0	8.8	1.0
New Mexico.....	W	915,771	100.0	93.1	1.4	4.4	1.1
New York.....	NE	15,299,833	100.0	88.3	1.9	9.0	0.7
North Carolina.....	S	6,334,327	100.0	86.1	1.5	11.9	0.5
North Dakota.....	MW	610,152	100.0	93.9	1.0	4.9	0.3
Ohio.....	MW	10,449,348	100.0	89.1	1.6	8.9	0.4
Oklahoma.....	S	2,968,586	100.0	90.4	1.5	7.5	0.6
Oregon.....	W	2,668,843	100.0	91.7	1.4	6.5	0.3
Pennsylvania.....	NE	11,312,456	100.0	87.6	1.7	10.2	0.5
Rhode Island.....	NE	920,410	100.0	85.3	2.0	10.9	1.7
South Carolina.....	S	3,342,463	100.0	86.2	1.6	11.3	0.8
South Dakota.....	MW	665,157	100.0	92.6	1.3	5.6	0.5
Tennessee.....	S	4,717,738	100.0	87.7	1.5	10.4	0.4
Texas.....	S	12,314,356	100.0	90.6	1.5	7.1	0.8
Utah.....	W	1,611,651	100.0	92.6	1.7	5.3	0.4
Vermont.....	NE	537,847	100.0	95.7	1.0	2.7	0.5
Virginia.....	S	5,823,862	100.0	87.9	1.6	10.1	0.5
Washington.....	W	4,539,183	100.0	92.1	1.5	6.0	0.5
West Virginia.....	S	1,748,575	100.0	87.6	1.3	10.6	0.5
Wisconsin.....	MW	4,667,560	100.0	90.3	1.5	7.9	0.3
Wyoming.....	W	418,117	100.0	95.0	1.2	3.2	0.6

Source: U.S. Bureau of the Census, 1990 Census.

NOTES:

1/ Flag type definitions: "Reported origin" means that the respondent reported their origin; "Within household" means that origin was obtained from someone within the household of the respondent; "Hot deck" means that origin was obtained from another neighboring household using the hot deck procedure; and lastly, "Substitution" means that origin and all other characteristics for everyone in the household were obtained from neighboring households using substitution procedures.

2/ Puerto Rico is not included in this table.

3/ Includes Housing Unit Population only.

Table 5. Total Allocation counts for the Hispanic Origin Question by Type of Allocation Flag for the United States, Regions, and States: 1990.

Source: U.S. Census Bureau
Internet Release date: July 1, 2002

Geographic area	State by region	Total Allocations	Percent distribution by flag type 1/				
			Total	Not allocated	Allocated		
				From race	Within household	Hot deck	Substitution
United States 2,3/		25,498,385	100.0	1.5	16.6	75.6	6.3
Region							
Northeast.....	(NE)	5,837,034	100.0	2.1	17.1	74.0	6.8
Midwest.....	(MW)	6,203,124	100.0	0.3	15.4	79.8	4.5
South.....	(S)	9,597,980	100.0	0.8	14.5	78.9	5.9
West.....	(W)	3,860,247	100.0	4.0	23.2	63.5	9.4
State							
Alabama.....	S	487,463	100.0	0.0	12.8	81.7	5.5
Alaska.....	W	24,256	100.0	0.4	25.2	62.3	12.0
Arizona.....	W	257,539	100.0	2.6	21.0	61.9	14.5
Arkansas.....	S	150,724	100.0	0.1	15.9	78.7	5.3
California.....	W	2,211,988	100.0	5.7	25.0	59.7	9.6
Colorado.....	W	243,634	100.0	2.0	19.5	66.9	11.6
Connecticut.....	NE	393,364	100.0	1.3	18.2	70.7	9.9
Delaware.....	S	62,625	100.0	0.3	17.7	70.0	12.0
District of Columbia.....	S	105,411	100.0	2.1	12.6	72.3	13.1
Florida.....	S	1,363,170	100.0	1.0	17.5	73.0	8.5
Georgia.....	S	867,151	100.0	0.2	13.4	81.9	4.6
Hawaii.....	W	88,764	100.0	0.6	23.6	63.7	12.2
Idaho.....	W	41,865	100.0	0.5	23.8	66.3	9.5
Illinois.....	MW	1,338,904	100.0	1.1	14.5	77.0	7.4
Indiana.....	MW	599,692	100.0	0.2	14.1	81.2	4.5
Iowa.....	MW	271,115	100.0	0.1	14.8	82.4	2.7
Kansas.....	MW	192,866	100.0	0.4	15.8	77.4	6.5
Kentucky.....	S	489,924	100.0	0.0	10.9	86.2	2.8
Louisiana.....	S	592,776	100.0	0.3	13.0	81.7	5.1
Maine.....	NE	88,357	100.0	0.0	16.1	77.1	6.8
Maryland.....	S	573,510	100.0	0.6	16.5	76.4	6.5
Massachusetts.....	NE	693,164	100.0	1.1	17.4	73.8	7.8
Michigan.....	MW	1,020,622	100.0	0.2	16.9	79.3	3.6
Minnesota.....	MW	384,478	100.0	0.1	17.3	78.1	4.5
Mississippi.....	S	380,968	100.0	0.0	11.5	85.0	3.6
Missouri.....	MW	569,891	100.0	0.1	13.5	83.4	3.0
Montana.....	W	37,415	100.0	0.1	21.5	70.8	7.6
Nebraska.....	MW	123,987	100.0	0.2	16.7	79.8	3.3
Nevada.....	W	108,086	100.0	1.5	19.6	73.8	5.1
New Hampshire.....	NE	92,267	100.0	0.1	16.8	75.6	7.6
New Jersey.....	NE	896,649	100.0	2.3	18.6	70.6	8.5
New Mexico.....	W	97,897	100.0	8.5	23.6	51.7	16.2
New York.....	NE	2,079,040	100.0	4.0	18.6	70.9	6.4
North Carolina.....	S	888,629	100.0	0.1	11.0	85.4	3.5
North Dakota.....	MW	37,759	100.0	0.0	15.9	79.9	4.2
Ohio.....	MW	1,153,333	100.0	0.1	15.4	81.3	3.2
Oklahoma.....	S	291,364	100.0	0.3	16.7	77.1	5.9
Oregon.....	W	227,704	100.0	0.4	18.2	77.1	4.3
Pennsylvania.....	NE	1,427,137	100.0	0.2	13.7	81.6	4.4
Rhode Island.....	NE	143,990	100.0	1.7	14.5	71.7	12.0
South Carolina.....	S	463,173	100.0	0.0	12.0	82.0	6.0
South Dakota.....	MW	49,535	100.0	0.0	17.9	74.9	7.2
Tennessee.....	S	584,098	100.0	0.0	12.0	84.5	3.5
Texas.....	S	1,355,168	100.0	3.4	19.2	68.4	9.0
Utah.....	W	124,430	100.0	0.7	23.8	69.9	5.6
Vermont.....	NE	23,066	100.0	0.1	23.8	63.4	12.7
Virginia.....	S	723,635	100.0	0.6	13.9	81.7	3.8
Washington.....	W	374,238	100.0	0.6	19.8	73.7	6.0
West Virginia.....	S	218,191	100.0	0.0	11.0	85.0	4.0
Wisconsin.....	MW	460,942	100.0	0.2	16.1	80.5	3.2
Wyoming.....	W	22,431	100.0	1.0	24.6	61.6	12.9

Source: U.S. Bureau of the Census, 1990 Census.

NOTES:

- 1/ Flag type definitions: "From race" means that an origin was obtained from a write-in response to the question on race; "Within household" means that origin was obtained from someone within the household of the respondent; "Hot deck" means that origin was obtained from another neighboring household using the hot deck procedure; and lastly, "Substitution" means that origin and all other characteristics for everyone in the household were obtained from neighboring households using substitution procedures.
- 2/ Puerto Rico is not included in this table.
- 3/ Includes Housing Unit Population only.

Table 6. Total Allocation counts for Hispanics by Type of Allocation Flag for the United States, Regions, and States: 1990.

Source: U.S. Census Bureau
Internet Release date: July 1, 2002

Geographic area	State by region	Total Hispanic 1/ Allocations	Percent distribution by flag type 2/				
			Total	Not allocated	Allocated		
				From race	Within household	Hot deck	Substitution
United States 2,4/		1,693,165	100.0	22.0	37.1	29.9	11.0
Region							
Northeast.....	(NE)	483,920	100.0	25.6	31.9	33.0	9.4
Midwest.....	(MW)	141,803	100.0	14.9	37.8	35.5	11.7
South.....	(S)	436,582	100.0	17.2	39.6	32.8	10.4
West.....	(W)	630,860	100.0	24.3	39.1	24.2	12.4
State							
Alabama.....	S	2,721	100.0	3.7	43.4	48.7	4.1
Alaska.....	W	985	100.0	10.6	52.2	27.8	9.4
Arizona.....	W	35,394	100.0	18.6	37.5	27.0	16.9
Arkansas.....	S	1,404	100.0	6.3	55.1	33.9	4.8
California.....	W	483,766	100.0	26.2	39.5	22.2	12.1
Colorado.....	W	28,349	100.0	17.4	34.8	33.3	14.5
Connecticut.....	NE	25,891	100.0	19.8	31.2	29.1	19.9
Delaware.....	S	1,593	100.0	13.2	35.9	32.4	18.5
District of Columbia.....	S	5,840	100.0	37.6	21.4	21.9	19.2
Florida.....	S	140,488	100.0	9.9	45.6	36.3	8.2
Georgia.....	S	10,992	100.0	12.2	41.1	39.6	7.2
Hawaii.....	W	7,105	100.0	7.6	45.8	35.5	11.1
Idaho.....	W	1,865	100.0	11.8	45.8	30.4	12.0
Illinois.....	MW	72,822	100.0	20.4	31.1	31.6	17.0
Indiana.....	MW	8,612	100.0	10.8	44.1	39.6	5.5
Iowa.....	MW	2,857	100.0	6.0	47.0	42.5	4.5
Kansas.....	MW	6,179	100.0	11.7	41.8	30.0	16.6
Kentucky.....	S	2,465	100.0	3.8	41.3	51.2	3.7
Louisiana.....	S	13,724	100.0	11.4	34.7	47.0	6.8
Maine.....	NE	597	100.0	3.9	50.8	39.9	5.5
Maryland.....	S	15,079	100.0	23.8	39.3	30.1	6.8
Massachusetts.....	NE	35,094	100.0	22.0	30.7	32.6	14.6
Michigan.....	MW	18,065	100.0	9.2	46.8	40.0	4.0
Minnesota.....	MW	4,712	100.0	7.5	46.1	37.5	9.0
Mississippi.....	S	2,246	100.0	2.6	35.6	58.9	2.9
Missouri.....	MW	5,668	100.0	6.8	42.8	44.1	6.4
Montana.....	W	604	100.0	8.9	51.2	35.1	4.8
Nebraska.....	MW	2,681	100.0	10.0	43.9	42.4	3.8
Nevada.....	W	9,802	100.0	16.5	42.6	36.1	4.9
New Hampshire.....	NE	1,013	100.0	6.5	49.5	36.6	7.4
New Jersey.....	NE	95,303	100.0	22.1	35.1	33.1	9.6
New Mexico.....	W	34,974	100.0	23.8	29.8	30.4	16.0
New York.....	NE	295,646	100.0	28.4	30.8	32.9	7.8
North Carolina.....	S	7,497	100.0	7.2	45.8	42.5	4.5
North Dakota.....	MW	257	100.0	5.1	47.5	40.5	7.0
Ohio.....	MW	12,773	100.0	8.6	44.6	42.9	3.9
Oklahoma.....	S	6,463	100.0	14.9	47.9	30.4	6.9
Oregon.....	W	6,988	100.0	11.9	48.0	32.9	7.1
Pennsylvania.....	NE	21,150	100.0	14.8	37.1	40.3	7.8
Rhode Island.....	NE	9,027	100.0	27.9	25.7	31.7	14.7
South Carolina.....	S	3,401	100.0	5.5	43.9	43.6	6.9
South Dakota.....	MW	386	100.0	4.4	48.7	39.9	7.0
Tennessee.....	S	3,583	100.0	4.9	43.1	48.3	3.8
Texas.....	S	200,990	100.0	22.7	35.6	28.1	13.7
Utah.....	W	5,968	100.0	15.3	45.8	32.1	6.8
Vermont.....	NE	199	100.0	7.5	52.3	37.2	3.0
Virginia.....	S	16,904	100.0	25.4	40.0	29.3	5.3
Washington.....	W	13,594	100.0	15.7	45.4	29.5	9.4
West Virginia.....	S	1,192	100.0	2.6	35.4	57.9	4.1
Wisconsin.....	MW	6,791	100.0	10.7	45.0	37.9	6.4
Wyoming.....	W	1,466	100.0	14.8	43.2	30.1	11.9

Source: U.S. Bureau of the Census, 1990 Census.

NOTES:

1/ Hispanics may be of any race.

2/ Flag type definitions: "From race" means that an origin was obtained from a write-in response to the question on race; "Within household" means that origin was obtained from someone within the household of the respondent; "Hot deck" means that origin was obtained from another neighboring household using the hot deck procedure; and lastly, "Substitution" means that origin and all other characteristics for everyone in the household were obtained from neighboring households using substitution procedures.

3/ Puerto Rico is not included in this table.

4/ Includes Housing Unit Population only.

Table 7. Total Allocation counts for Non-Hispanics by Type of Allocation Flag for the United States, Regions, and States: 1990.

Source: U.S. Census Bureau
Internet Release date: July 1, 2002

Geographic area	State by region	Total Non-Hispanic Allocations	Percent distribution by flag type 1/			
			Total	Allocated		
				Within household	Hot deck	Substitution
United States 2,3/		23,805,220	100.0	15.2	78.9	5.9
Region						
Northeast.....	(NE)	5,353,114	100.0	15.7	77.7	6.6
Midwest.....	(MW)	6,061,321	100.0	14.8	80.8	4.3
South.....	(S)	9,161,398	100.0	13.3	81.1	5.6
West.....	(W)	3,229,387	100.0	20.0	71.2	8.8
State						
Alabama.....	S	484,742	100.0	12.6	81.9	5.5
Alaska.....	W	23,271	100.0	24.1	63.8	12.1
Arizona.....	W	222,145	100.0	18.4	67.4	14.2
Arkansas.....	S	149,320	100.0	15.6	79.1	5.3
California.....	W	1,728,222	100.0	20.9	70.2	8.9
Colorado.....	W	215,285	100.0	17.5	71.3	11.2
Connecticut.....	NE	367,473	100.0	17.2	73.6	9.2
Delaware.....	S	61,032	100.0	17.2	71.0	11.8
District of Columbia.....	S	99,571	100.0	12.0	75.2	12.7
Florida.....	S	1,222,682	100.0	14.3	77.2	8.6
Georgia.....	S	856,159	100.0	13.0	82.4	4.6
Hawaii.....	W	81,659	100.0	21.6	66.1	12.2
Idaho.....	W	40,000	100.0	22.7	67.9	9.3
Illinois.....	MW	1,266,082	100.0	13.6	79.6	6.8
Indiana.....	MW	591,080	100.0	13.7	81.8	4.5
Iowa.....	MW	268,258	100.0	14.5	82.8	2.7
Kansas.....	MW	186,687	100.0	14.9	79.0	6.1
Kentucky.....	S	487,459	100.0	10.8	86.4	2.8
Louisiana.....	S	579,052	100.0	12.5	82.5	5.0
Maine.....	NE	87,760	100.0	15.8	77.4	6.8
Maryland.....	S	558,431	100.0	15.9	77.7	6.5
Massachusetts.....	NE	658,070	100.0	16.6	76.0	7.4
Michigan.....	MW	1,002,557	100.0	16.3	80.1	3.6
Minnesota.....	MW	379,766	100.0	16.9	78.6	4.5
Mississippi.....	S	378,722	100.0	11.3	85.1	3.6
Missouri.....	MW	564,223	100.0	13.2	83.8	3.0
Montana.....	W	36,811	100.0	21.0	71.3	7.7
Nebraska.....	MW	121,306	100.0	16.1	80.6	3.2
Nevada.....	W	98,284	100.0	17.3	77.5	5.2
New Hampshire.....	NE	91,254	100.0	16.4	76.0	7.6
New Jersey.....	NE	801,346	100.0	16.6	75.0	8.4
New Mexico.....	W	62,923	100.0	20.2	63.6	16.3
New York.....	NE	1,783,394	100.0	16.6	77.2	6.2
North Carolina.....	S	881,132	100.0	10.8	85.8	3.4
North Dakota.....	MW	37,502	100.0	15.7	80.2	4.2
Ohio.....	MW	1,140,560	100.0	15.1	81.7	3.2
Oklahoma.....	S	284,901	100.0	15.9	78.2	5.9
Oregon.....	W	220,716	100.0	17.3	78.5	4.2
Pennsylvania.....	NE	1,405,987	100.0	13.4	82.2	4.4
Rhode Island.....	NE	134,963	100.0	13.8	74.4	11.8
South Carolina.....	S	459,772	100.0	11.7	82.3	6.0
South Dakota.....	MW	49,149	100.0	17.7	75.1	7.2
Tennessee.....	S	580,515	100.0	11.8	84.7	3.5
Texas.....	S	1,154,178	100.0	16.4	75.5	8.1
Utah.....	W	118,462	100.0	22.7	71.8	5.5
Vermont.....	NE	22,867	100.0	23.5	63.7	12.8
Virginia.....	S	706,731	100.0	13.3	82.9	3.8
Washington.....	W	360,644	100.0	18.8	75.3	5.9
West Virginia.....	S	216,999	100.0	10.8	85.1	4.0
Wisconsin.....	MW	454,151	100.0	15.7	81.1	3.2
Wyoming.....	W	20,965	100.0	23.3	63.8	12.9

Source: U.S. Bureau of the Census, 1990 Census.

NOTES:

1/ Flag type definitions: "Within household" means that origin was obtained from someone within the household of the respondent; "Hot deck" means that origin was obtained from another neighboring household using the hot deck procedure; and lastly, "Substitution" means that origin and all other characteristics for everyone in the household were obtained from neighboring households using substitution procedures.

2/ Puerto Rico is not included in this table.

3/ Includes Housing Unit Population only.

Table 8. Total Population for the Hispanic Origin Question by Allocation Status and Type of Allocation Flag for the United States, Regions, and States: 2000.

Source: U.S. Census Bureau
Internet Release date: July 1, 2002

Geographic area	State by region	Total population	Percent distribution by flag type 1/							
			Total	Not Allocated			Allocated			
				Reported origin	Multiple origin	From race	Within household	Hot deck surname	Hot deck no surname	Substitution
United States 2,3/		281,421,906	100.0	94.0	0.2	0.2	1.9	1.9	0.6	1.2
Region										
Northeast.....	(NE)	53,594,378	100.0	93.8	0.3	0.1	1.9	1.8	0.6	1.5
Midwest.....	(MW)	64,392,776	100.0	95.2	0.1	0.1	1.6	1.7	0.5	0.9
South.....	(S)	100,236,820	100.0	93.7	0.2	0.1	1.9	2.3	0.6	1.3
West.....	(W)	63,197,932	100.0	93.5	0.4	0.3	2.5	1.4	0.7	1.2
State										
Alabama.....	S	4,447,100	100.0	93.0	0.0	0.0	1.7	3.0	0.6	1.6
Alaska.....	W	626,932	100.0	94.4	0.1	0.1	2.4	1.2	0.9	0.9
Airzona.....	W	5,130,632	100.0	93.2	0.3	0.3	2.0	1.6	0.6	2.1
Arkansas.....	S	2,673,400	100.0	94.4	0.0	0.0	1.7	2.5	0.6	0.8
California.....	W	33,871,648	100.0	92.9	0.5	0.5	3.0	1.4	0.7	1.1
Colorado.....	W	4,301,261	100.0	94.3	0.2	0.2	1.8	1.6	0.6	1.3
Connecticut.....	NE	3,405,565	100.0	94.8	0.2	0.1	1.6	1.6	0.7	0.9
Delware.....	S	783,600	100.0	92.9	0.1	0.1	1.7	2.0	1.1	2.1
District of Columbia.....	S	572,059	100.0	88.7	0.1	0.2	2.9	3.2	2.6	2.2
Florida.....	S	15,982,378	100.0	93.8	0.4	0.1	1.9	1.9	0.5	1.4
Georgia.....	S	8,186,453	100.0	92.9	0.1	0.1	2.1	2.9	0.5	1.4
Hawaii.....	W	1,211,537	100.0	91.6	0.6	0.1	3.4	1.7	1.2	1.4
Idaho.....	W	1,293,953	100.0	95.5	0.1	0.1	1.5	1.2	0.5	1.1
Illinois.....	MW	12,419,293	100.0	93.9	0.3	0.1	2.0	1.8	0.5	1.5
Indiana.....	MW	6,080,485	100.0	94.7	0.1	0.0	1.4	1.8	0.4	1.6
Iowa.....	MW	2,926,324	100.0	96.4	0.0	0.0	1.2	1.3	0.4	0.5
Kansas.....	MW	2,688,418	100.0	95.7	0.1	0.1	1.4	1.5	0.5	0.7
Kentucky.....	S	4,041,769	100.0	95.0	0.0	0.0	1.4	2.4	0.5	0.7
Lousiana.....	S	4,468,976	100.0	93.5	0.0	0.0	2.0	2.7	0.6	1.2
Maine.....	NE	1,274,923	100.0	95.9	0.0	0.0	1.2	1.5	0.5	0.8
Maryland.....	S	5,296,486	100.0	93.3	0.1	0.1	2.0	2.3	0.6	1.7
Massachusetts.....	NE	6,349,097	100.0	94.5	0.2	0.1	1.6	1.9	0.7	1.0
Michigan.....	MW	9,938,444	100.0	95.0	0.1	0.0	1.8	2.0	0.5	0.7
Minnesota.....	MW	4,919,479	100.0	95.9	0.0	0.0	1.5	1.4	0.5	0.7
Mississippi.....	S	2,844,658	100.0	92.9	0.0	0.0	2.3	3.2	0.7	0.8
Missouri.....	MW	5,595,211	100.0	95.5	0.0	0.0	1.5	1.8	0.5	0.7
Montana.....	W	902,195	100.0	95.3	0.0	0.0	1.5	1.4	0.8	1.0
Nebraska.....	MW	1,711,263	100.0	96.4	0.1	0.1	1.3	1.2	0.5	0.5
Nevada.....	W	1,998,257	100.0	93.0	0.3	0.2	2.2	1.3	0.8	2.2
New Hampshire.....	NE	1,235,786	100.0	95.1	0.0	0.0	1.3	1.4	0.7	1.4
New Jersey.....	NE	8,414,350	100.0	93.9	0.3	0.2	2.1	1.6	0.6	1.2
New Mexico.....	W	1,819,046	100.0	92.6	0.4	0.6	2.0	1.4	0.9	2.1
New York.....	NE	18,976,457	100.0	92.3	0.4	0.2	2.3	2.0	0.6	2.2
North Carolina.....	S	8,049,313	100.0	94.2	0.1	0.1	1.7	2.5	0.5	1.0
North Dakota.....	MW	642,200	100.0	96.3	0.0	0.0	1.2	1.2	0.7	0.5
Ohio.....	MW	11,353,140	100.0	95.6	0.0	0.0	1.5	1.9	0.4	0.6
Oklahoma.....	S	3,450,654	100.0	95.1	0.1	0.1	1.6	2.0	0.5	0.7
Oregon.....	W	3,421,399	100.0	95.2	0.1	0.1	1.6	1.4	0.5	1.0
Pennsylvania.....	NE	12,281,054	100.0	95.0	0.1	0.0	1.5	1.9	0.5	1.0
Rhode Island.....	NE	1,048,319	100.0	93.4	0.2	0.1	1.6	1.8	1.2	1.7
South Carolina.....	S	4,012,012	100.0	93.3	0.0	0.0	1.8	2.7	0.6	1.5
South Dakota.....	MW	754,844	100.0	95.8	0.0	0.0	1.4	1.2	0.7	0.8
Tennessee.....	S	5,689,283	100.0	94.5	0.0	0.0	1.5	2.4	0.5	1.0
Texas.....	S	20,851,820	100.0	93.4	0.4	0.3	2.1	1.7	0.6	1.6
Utah.....	W	2,233,169	100.0	95.5	0.1	0.1	2.0	1.1	0.4	0.7
Vermont.....	NE	608,827	100.0	95.1	0.0	0.0	1.3	1.3	0.7	1.6
Virginia.....	S	7,078,515	100.0	94.3	0.1	0.1	1.7	2.3	0.5	1.0
Washington.....	W	5,894,121	100.0	94.4	0.1	0.1	1.7	1.9	0.7	1.1
West Virginia.....	S	1,808,344	100.0	95.4	0.0	0.0	1.3	2.3	0.6	0.5
Wisconsin.....	MW	5,363,675	100.0	95.3	0.1	0.0	1.4	1.7	0.5	1.0
Wyoming.....	W	493,782	100.0	94.6	0.1	0.1	1.6	1.1	0.8	1.8

Source: U.S. Bureau of the Census, 2000 Census.

NOTES:

1/ Flag type definitions: "Reported origin" means that the respondent reported his/her origin; "Multiple origin" means that the respondent provided two or more origin responses, but only one response was allowed; "From race" means that an origin was obtained from a write-in response to the question on race; "Within household" means that origin was obtained from someone within the household of the respondent; "Hot deck surname" means that origin was obtained from another neighboring household using a hot deck procedure in which the respondent's last name (Spanish or non-Spanish) determined the hot deck from which an origin could be assigned; "Hot deck no surname" means that the respondent obtained an origin from a hot deck containing reported origins of people who either did not provide a name or their name could not be determined to be Spanish or not Spanish; and lastly, "Substitution" means that origin and all other characteristics for everyone in the household were obtained from neighboring households using substitution procedures.

2/ Puerto Rico is not included in this table.

3/ Includes Housing Unit Population and Group Quarters Population.

Table 9. Total Hispanic Population for the Hispanic Origin Question by Allocation Status and Type of Allocation Flag for the United States, Regions, and States: 2000.

Source: U.S. Census Bureau
Internet Release date: July 1, 2002

Geographic area	State by region	Total Hispanic 1/ population	Percent distribution by flag type 2/							
			Total	Not Allocated			Allocated			
				Reported origin	Multiple origin	From race	Within household	Hot deck surname	Hot deck no surname	Substitution
United States 3,4/		35,305,818	100.0	90.8	1.7	1.2	3.6	0.7	0.4	1.6
Region										
Northeast.....	(NE)	5,254,087	100.0	88.9	2.5	1.4	3.6	0.8	0.5	2.4
Midwest.....	(MW)	3,124,532	100.0	91.2	1.9	1.1	3.2	0.6	0.4	1.7
South.....	(S)	11,586,696	100.0	91.5	1.4	1.0	3.1	0.9	0.4	1.7
West.....	(W)	15,340,503	100.0	90.9	1.5	1.4	4.0	0.7	0.3	1.3
State										
Alabama.....	S	75,830	100.0	89.5	1.2	1.1	4.7	0.6	0.9	1.9
Alaska.....	W	25,852	100.0	91.8	2.1	1.4	2.3	0.4	1.2	0.8
Arizona.....	W	1,295,617	100.0	91.4	1.2	1.2	3.0	0.9	0.2	2.1
Arkansas.....	S	86,866	100.0	91.6	1.3	1.2	3.7	0.5	0.6	1.1
California.....	W	10,966,556	100.0	90.8	1.6	1.4	4.4	0.6	0.3	1.0
Colorado.....	W	735,601	100.0	91.2	1.3	1.3	3.0	1.2	0.3	1.7
Connecticut.....	NE	320,323	100.0	91.2	2.2	1.0	2.8	0.7	0.5	1.6
Delaware.....	S	37,277	100.0	88.7	2.0	1.1	3.4	0.6	1.0	3.1
District of Columbia.....	S	44,953	100.0	88.0	1.6	2.3	4.8	0.7	1.1	1.5
Florida.....	S	2,682,715	100.0	91.1	2.3	0.6	3.2	0.8	0.4	1.6
Georgia.....	S	435,227	100.0	90.0	1.3	1.2	4.5	0.6	0.5	1.9
Hawaii.....	W	87,699	100.0	86.1	5.9	1.9	3.4	0.3	0.6	1.9
Idaho.....	W	101,690	100.0	92.5	1.1	1.5	2.7	0.4	0.4	1.5
Illinois.....	MW	1,530,262	100.0	90.8	2.0	0.8	3.4	0.5	0.2	2.2
Indiana.....	MW	214,536	100.0	90.4	1.9	1.2	2.9	0.7	0.4	2.5
Iowa.....	MW	82,473	100.0	92.7	1.2	1.3	2.8	0.4	0.5	1.0
Kansas.....	MW	188,252	100.0	92.7	1.3	1.5	2.6	0.6	0.3	1.1
Kentucky.....	S	59,939	100.0	91.0	1.3	1.2	3.6	0.8	0.9	1.2
Louisiana.....	S	107,738	100.0	89.9	1.6	1.2	3.7	0.8	1.5	1.4
Maine.....	NE	9,360	100.0	90.6	1.6	1.3	3.8	0.8	1.1	0.8
Maryland.....	S	227,916	100.0	88.7	2.1	1.8	4.3	0.6	0.7	1.8
Massachusetts.....	NE	428,729	100.0	89.5	2.4	1.5	3.2	1.1	0.9	1.5
Michigan.....	MW	323,877	100.0	91.4	1.9	1.4	3.1	0.7	0.6	0.9
Minnesota.....	MW	143,382	100.0	91.4	1.4	1.3	3.3	0.6	0.7	1.2
Mississippi.....	S	39,569	100.0	89.1	1.2	1.0	5.7	0.9	1.0	1.2
Missouri.....	MW	118,592	100.0	92.0	1.3	1.3	3.0	0.5	0.8	1.2
Montana.....	W	18,081	100.0	91.6	1.1	1.4	3.0	0.5	1.0	1.4
Nebraska.....	MW	94,425	100.0	92.9	1.2	1.5	2.9	0.5	0.3	0.8
Nevada.....	W	393,970	100.0	91.0	1.6	1.1	3.6	0.4	0.4	1.9
New Hampshire.....	NE	20,489	100.0	89.5	2.2	1.2	3.1	0.5	1.5	2.1
New Jersey.....	NE	1,117,191	100.0	89.7	2.5	1.3	3.7	0.8	0.4	1.5
New Mexico.....	W	765,386	100.0	91.4	1.0	1.4	2.1	1.5	0.4	2.4
New York.....	NE	2,867,583	100.0	88.0	2.4	1.4	3.8	0.8	0.4	3.0
North Carolina.....	S	378,963	100.0	91.4	1.3	1.3	3.6	0.5	0.4	1.5
North Dakota.....	MW	7,786	100.0	92.0	1.7	1.0	3.3	0.4	1.1	0.6
Ohio.....	MW	217,123	100.0	91.6	2.0	1.3	3.0	0.7	0.6	0.8
Oklahoma.....	S	179,304	100.0	93.3	1.3	1.2	2.6	0.5	0.5	0.7
Oregon.....	W	275,314	100.0	92.0	1.5	1.3	3.3	0.4	0.4	1.2
Pennsylvania.....	NE	394,088	100.0	90.7	2.5	1.2	2.9	0.7	0.6	1.5
Rhode Island.....	NE	90,820	100.0	87.2	2.2	1.7	3.3	0.8	0.8	4.0
South Carolina.....	S	95,076	100.0	90.2	1.2	1.3	3.8	0.6	0.7	2.1
South Dakota.....	MW	10,903	100.0	91.6	1.6	1.3	3.5	0.3	1.0	0.8
Tennessee.....	S	123,838	100.0	90.8	1.2	1.4	3.7	0.5	0.7	1.6
Texas.....	S	6,669,666	100.0	92.0	1.1	1.0	2.8	1.0	0.3	1.7
Utah.....	W	201,559	100.0	91.6	1.3	1.6	3.5	0.5	0.4	1.1
Vermont.....	NE	5,504	100.0	90.0	1.6	1.2	3.5	0.7	1.5	1.5
Virginia.....	S	329,540	100.0	90.5	1.7	1.7	3.8	0.6	0.6	1.1
Washington.....	W	441,509	100.0	91.2	1.5	1.4	3.3	0.5	0.5	1.6
West Virginia.....	S	12,279	100.0	90.2	1.2	0.9	5.1	1.0	1.0	0.5
Wisconsin.....	MW	192,921	100.0	90.9	2.2	1.1	2.9	0.7	0.5	1.7
Wyoming.....	W	31,669	100.0	92.2	1.1	1.4	2.4	0.7	0.5	1.8

Source: U.S. Bureau of the Census, 2000 Census.

NOTES:

1/ Hispanics may be of any race.

2/ Flag type definitions: "Reported origin" means that the respondent reported his/her origin; "Multiple origin" means that the respondent provided two or more origin responses, but only one response was allowed; "From race" means that an origin was obtained from a write-in response to the question on race; "Within household" means that origin was obtained from someone within the household of the respondent; "Hot deck surname" means that origin was obtained from another neighboring household using a hot deck procedure in which the respondent's last name (Spanish or non-Spanish) determined the hot deck from which an origin could be assigned; "Hot deck no surname" means that the respondent obtained an origin from a hot deck containing reported origins of people who either did not provide a name or their name could not be determined to be Spanish or not Spanish; and lastly, "Substitution" means that origin and all other characteristics for everyone in the household were obtained from neighboring households using substitution procedures.

3/ Puerto Rico is not included in this table.

4/ Includes Housing Unit Population and Group Quarters Population.

Table 10. Total Non-Hispanic Population for the Hispanic Origin Question by Allocation Status and Type of Allocation Flag for the United States, Regions, and States: 2000.

Source: U.S. Census Bureau
Internet Release date: July 1, 2002

Geographic area	State by region	Total Non-Hispanic population	Percent distribution by flag type 1/						
			Total	Not Allocated		Allocated			
				Reported origin	Multiple origin	Within household	Hot deck surname	Hot deck no surname	Substitution
United States 2,3/		246,116,088	100.0	94.5	0.0	1.7	2.0	0.6	1.2
Region									
Northeast.....	(NE)	48,340,291	100.0	94.3	0.0	1.7	2.0	0.6	1.4
Midwest.....	(MW)	61,268,244	100.0	95.4	0.0	1.5	1.8	0.5	0.9
South.....	(S)	88,650,124	100.0	94.0	0.0	1.7	2.4	0.6	1.2
West.....	(W)	47,857,429	100.0	94.3	0.0	2.0	1.7	0.8	1.2
State									
Alabama.....	S	4,371,270	100.0	93.1	0.0	1.7	3.0	0.6	1.6
Alaska.....	W	601,080	100.0	94.5	0.0	2.4	1.3	0.9	0.9
Airzona.....	W	3,835,015	100.0	93.8	0.0	1.7	1.8	0.7	2.0
Arkansas.....	S	2,586,534	100.0	94.5	0.0	1.6	2.6	0.6	0.8
California.....	W	22,905,092	100.0	94.0	0.0	2.3	1.7	0.8	1.1
Colorado.....	W	3,565,660	100.0	94.9	0.0	1.5	1.7	0.6	1.2
Connecticut.....	NE	3,085,242	100.0	95.2	0.0	1.5	1.6	0.8	0.9
Delware.....	S	746,323	100.0	93.1	0.0	1.6	2.1	1.1	2.1
District of Columbia.....	S	527,106	100.0	88.8	0.0	2.8	3.4	2.7	2.3
Florida.....	S	13,299,663	100.0	94.3	0.0	1.7	2.1	0.6	1.3
Georgia.....	S	7,751,226	100.0	93.1	0.0	2.0	3.0	0.5	1.4
Hawaii.....	W	1,123,838	100.0	92.0	0.2	3.4	1.8	1.2	1.4
Idaho.....	W	1,192,263	100.0	95.8	0.0	1.4	1.2	0.5	1.1
Illinois.....	MW	10,889,031	100.0	94.3	0.0	1.8	2.0	0.5	1.4
Indiana.....	MW	5,865,949	100.0	94.9	0.0	1.3	1.9	0.4	1.5
Iowa.....	MW	2,843,851	100.0	96.6	0.0	1.1	1.4	0.4	0.5
Kansas.....	MW	2,500,166	100.0	96.0	0.0	1.3	1.6	0.5	0.7
Kentucky.....	S	3,981,830	100.0	95.1	0.0	1.3	2.4	0.5	0.7
Lousiana.....	S	4,361,238	100.0	93.6	0.0	1.9	2.7	0.6	1.2
Maine.....	NE	1,265,563	100.0	96.0	0.0	1.2	1.5	0.5	0.8
Maryland.....	S	5,068,570	100.0	93.5	0.0	1.9	2.4	0.6	1.7
Massachusetts.....	NE	5,920,368	100.0	94.9	0.0	1.5	1.9	0.7	0.9
Michigan.....	MW	9,614,567	100.0	95.1	0.0	1.7	2.0	0.5	0.7
Minnesota.....	MW	4,776,097	100.0	96.0	0.0	1.4	1.5	0.5	0.6
Mississippi.....	S	2,805,089	100.0	93.0	0.0	2.2	3.3	0.7	0.8
Missouri.....	MW	5,476,619	100.0	95.6	0.0	1.4	1.9	0.4	0.6
Montana.....	W	884,114	100.0	95.4	0.0	1.4	1.4	0.8	1.0
Nebraska.....	MW	1,616,838	100.0	96.6	0.0	1.2	1.2	0.5	0.5
Nevada.....	W	1,604,287	100.0	93.5	0.0	1.9	1.6	0.9	2.3
New Hampshire.....	NE	1,215,297	100.0	95.2	0.0	1.2	1.4	0.7	1.4
New Jersey.....	NE	7,297,159	100.0	94.6	0.0	1.8	1.8	0.6	1.1
New Mexico.....	W	1,053,660	100.0	93.5	0.0	2.0	1.3	1.3	1.8
New York.....	NE	16,108,874	100.0	93.1	0.0	2.1	2.2	0.6	2.0
North Carolina.....	S	7,670,350	100.0	94.4	0.0	1.6	2.6	0.5	1.0
North Dakota.....	MW	634,414	100.0	96.4	0.0	1.2	1.2	0.7	0.5
Ohio.....	MW	11,136,017	100.0	95.7	0.0	1.4	1.9	0.4	0.6
Oklahoma.....	S	3,271,350	100.0	95.2	0.0	1.5	2.1	0.5	0.7
Oregon.....	W	3,146,085	100.0	95.5	0.0	1.4	1.5	0.5	1.0
Pennsylvania.....	NE	11,886,966	100.0	95.1	0.0	1.4	1.9	0.5	1.0
Rhode Island.....	NE	957,499	100.0	94.0	0.0	1.4	1.9	1.2	1.4
South Carolina.....	S	3,916,936	100.0	93.4	0.0	1.8	2.8	0.6	1.5
South Dakota.....	MW	743,941	100.0	95.9	0.0	1.4	1.2	0.7	0.8
Tennessee.....	S	5,565,445	100.0	94.6	0.0	1.5	2.4	0.5	1.0
Texas.....	S	14,182,154	100.0	94.0	0.0	1.7	2.1	0.7	1.5
Utah.....	W	2,031,610	100.0	95.9	0.0	1.9	1.1	0.4	0.7
Vermont.....	NE	603,323	100.0	95.2	0.0	1.3	1.3	0.7	1.6
Virginia.....	S	6,748,975	100.0	94.5	0.0	1.6	2.4	0.5	1.0
Washington.....	W	5,452,612	100.0	94.6	0.0	1.6	2.0	0.7	1.1
West Virginia.....	S	1,796,065	100.0	95.4	0.0	1.3	2.3	0.6	0.5
Wisconsin.....	MW	5,170,754	100.0	95.5	0.0	1.4	1.7	0.5	1.0
Wyoming.....	W	462,113	100.0	94.7	0.0	1.5	1.2	0.8	1.8

Source: U.S. Bureau of the Census, 2000 Census.

NOTES:

1/ Flag type definitions: "Reported origin" means that the respondent reported his/her origin; "Multiple origin" means that the respondent provided two or more origin responses, but only one response was allowed; "Within household" means that origin was obtained from someone within the household of the respondent; "Hot deck surname" means that origin was obtained from another neighboring household using a hot deck procedure in which the respondent's last name (Spanish or non-Spanish) determined the hot deck from which an origin could be assigned; "Hot deck no surname" means that the respondent obtained an origin from a hot deck containing reported origins of people who either did not provide a name or their name could not be determined to be Spanish or not Spanish; and lastly, "Substitution" means that origin and all other characteristics for everyone in the household were obtained from neighboring households using substitution procedures.

2/ Puerto Rico is not included in this table.

3/ Includes Housing Unit Population and Group Quarters Population.

Table 11. Total Allocation counts for the Hispanic Origin Question by Type of Allocation Flag for the United States, Regions, and States: 2000.

Source: U.S. Census Bureau
Internet Release date: July 1, 2002

Geographic area	State by region	Total Allocations	Percent distribution by flag type 1/						
			Total	Not Allocated		Allocated			
				Multiple Origin	From race	Within household	Hot deck surname	Hot deck no surname	Substitution
United States 2,3/		16,840,641	100.0	3.6	2.6	32.4	31.4	9.6	20.4
Region									
Northeast.....	(NE)	3,323,125	100.0	4.0	2.2	30.6	29.7	10.1	23.4
Midwest.....	(MW)	3,117,259	100.0	2.0	1.1	32.5	36.0	9.5	18.9
South.....	(S)	6,280,216	100.0	2.8	1.9	29.6	36.1	9.2	20.5
West.....	(W)	4,120,041	100.0	5.9	5.1	37.9	22.1	9.9	19.1
State									
Alabama.....	S	309,088	100.0	0.4	0.3	25.1	43.2	8.4	22.6
Alaska.....	W	35,154	100.0	1.8	1.0	43.2	22.1	16.3	15.6
Arizona.....	W	351,299	100.0	4.5	4.3	29.6	23.2	8.4	29.9
Arkansas.....	S	150,530	100.0	0.8	0.7	29.8	44.3	10.3	13.9
California.....	W	2,389,808	100.0	7.5	6.4	42.0	19.3	9.3	15.5
Colorado.....	W	245,211	100.0	4.1	4.0	30.9	28.4	9.9	22.7
Connecticut.....	NE	175,523	100.0	4.3	1.9	31.0	30.1	14.3	18.4
Delaware.....	S	55,839	100.0	1.5	0.7	24.2	28.2	15.6	29.8
District of Columbia.....	S	64,453	100.0	1.2	1.6	26.0	28.3	23.2	19.7
Florida.....	S	994,630	100.0	6.3	1.7	30.8	30.1	8.7	22.3
Georgia.....	S	579,235	100.0	1.1	0.9	29.8	40.4	7.5	20.3
Hawaii.....	W	101,949	100.0	6.7	1.6	40.5	20.4	13.8	17.0
Idaho.....	W	57,987	100.0	2.1	2.5	32.6	26.4	11.3	25.1
Illinois.....	MW	760,517	100.0	4.1	1.7	32.0	29.6	7.7	24.9
Indiana.....	MW	322,199	100.0	1.4	0.8	26.5	34.5	7.5	29.4
Iowa.....	MW	104,017	100.0	1.0	1.1	33.1	37.7	12.4	14.7
Kansas.....	MW	114,726	100.0	2.2	2.4	32.5	35.5	11.1	16.2
Kentucky.....	S	200,355	100.0	0.5	0.3	27.3	47.9	9.8	14.1
Louisiana.....	S	290,626	100.0	0.7	0.5	30.2	41.3	9.5	17.8
Maine.....	NE	51,943	100.0	0.5	0.2	30.3	37.4	13.0	18.6
Maryland.....	S	357,411	100.0	1.5	1.2	29.0	33.8	9.0	25.6
Massachusetts.....	NE	349,345	100.0	3.4	1.9	30.0	34.2	13.2	17.4
Michigan.....	MW	497,285	100.0	1.3	0.9	35.4	39.4	9.7	13.2
Minnesota.....	MW	203,127	100.0	1.1	0.9	35.5	34.7	11.9	15.9
Mississippi.....	S	200,901	100.0	0.3	0.2	32.2	45.9	9.8	11.5
Missouri.....	MW	249,840	100.0	0.8	0.6	32.7	41.2	10.2	14.6
Montana.....	W	42,535	100.0	0.6	0.6	31.2	30.1	16.6	20.9
Nebraska.....	MW	61,858	100.0	1.9	2.3	36.5	32.6	12.8	14.0
Nevada.....	W	140,183	100.0	4.7	3.1	31.3	19.0	10.8	31.0
New Hampshire.....	NE	60,452	100.0	0.9	0.4	26.1	28.7	14.7	29.2
New Jersey.....	NE	511,004	100.0	5.7	2.9	34.5	27.1	10.2	19.5
New Mexico.....	W	133,865	100.0	5.6	7.9	27.1	18.9	12.3	28.1
New York.....	NE	1,460,063	100.0	5.0	2.8	30.3	26.1	7.7	28.1
North Carolina.....	S	465,481	100.0	1.1	1.0	28.6	42.6	8.6	18.0
North Dakota.....	MW	23,551	100.0	0.6	0.3	33.9	31.9	18.3	14.9
Ohio.....	MW	496,223	100.0	1.0	0.6	33.4	42.5	9.2	13.4
Oklahoma.....	S	169,009	100.0	1.6	1.3	31.7	40.8	10.2	14.4
Oregon.....	W	162,753	100.0	2.7	2.1	32.9	29.4	11.2	21.7
Pennsylvania.....	NE	616,175	100.0	1.7	0.8	29.8	37.7	10.7	19.5
Rhode Island.....	NE	68,841	100.0	3.3	2.2	24.2	27.0	17.9	25.4
South Carolina.....	S	267,787	100.0	0.5	0.5	27.5	40.5	8.8	22.2
South Dakota.....	MW	31,478	100.0	0.6	0.4	34.7	28.2	17.2	18.8
Tennessee.....	S	311,427	100.0	0.6	0.6	27.5	43.1	9.1	19.2
Texas.....	S	1,379,066	100.0	5.5	5.0	31.0	25.8	8.8	23.9
Utah.....	W	99,697	100.0	2.9	3.2	45.5	24.4	8.2	15.9
Vermont.....	NE	29,779	100.0	0.4	0.2	27.3	25.6	14.7	31.7
Virginia.....	S	400,304	100.0	1.5	1.4	29.7	40.5	9.7	17.2
Washington.....	W	332,782	100.0	2.2	1.8	30.3	34.1	11.5	20.1
West Virginia.....	S	84,074	100.0	0.3	0.1	28.7	48.4	12.5	10.0
Wisconsin.....	MW	252,438	100.0	1.7	0.8	30.6	35.4	10.4	21.0
Wyoming.....	W	26,818	100.0	1.4	1.6	29.0	20.9	14.0	33.1

Source: U.S. Bureau of the Census, 2000 Census.

NOTES:

1/ Flag type definitions: "Multiple origin" means that the respondent provided two or more origin responses, but only one response was allowed; "From race" means that an origin was obtained from a write-in response to the question on race; "Within household" means that origin was obtained from someone within the household of the respondent; "Hot deck surname" means that origin was obtained from another neighboring household using a hot deck procedure in which the respondent's last (Spanish or non-Spanish) determined the hot deck from which an origin could be assigned; name "Hot deck no surname" means that the respondent obtained an origin from a hot deck containing reported origins of people who either did not provide a name or their name could not be determined to be Spanish or not Spanish; and lastly, "Substitution" means that origin and all other characteristics for everyone in the household were obtained from neighboring households using substitution procedures.

2/ Puerto Rico is not included in this table.

3/ Includes Housing Unit Population and Group Quarters Population.

Table 12. Total Allocation counts for Hispanics by Type of Allocation Flag for the United States, Regions, and States: 2000.

Source: U.S. Census Bureau
Internet Release date: July 1, 2002

Geographic area	State by region	Total Hispanic 1/ Allocations	Percent distribution by flag type 2/ Total						
			Total	Not allocated		Allocated			
				Multiple origin	From race	Within household	Hot deck surname	Hot deck no surname	Substitution
United States 3,4/		3,234,225	100.0	18.1	13.4	38.9	8.1	4.0	17.5
Region									
Northeast.....	(NE)	584,386	100.0	22.0	12.3	32.5	7.3	4.3	21.6
Midwest.....	(MW)	274,802	100.0	21.1	12.1	36.1	6.6	4.3	21.6
South.....	(S)	981,780	100.0	17.0	11.9	36.9	10.0	4.3	19.8
West.....	(W)	1,393,257	100.0	16.7	15.1	43.6	7.4	3.5	13.8
State									
Alabama.....	S	7,943	100.0	11.6	10.9	44.7	6.0	8.4	18.4
Alaska.....	W	2,107	100.0	25.9	16.9	27.8	4.6	15.0	9.8
Arizona.....	W	111,746	100.0	13.7	13.6	35.0	10.1	2.9	24.8
Arkansas.....	S	7,310	100.0	15.2	14.7	44.1	5.7	7.5	12.7
California.....	W	1,011,780	100.0	17.1	15.2	47.2	6.3	3.3	10.8
Colorado.....	W	64,476	100.0	15.0	15.2	33.9	13.7	3.2	19.0
Connecticut.....	NE	28,282	100.0	25.2	11.6	31.6	7.9	5.4	18.3
Delaware.....	S	4,212	100.0	17.9	9.8	30.5	5.7	8.8	27.4
District of Columbia.....	S	5,376	100.0	13.1	19.0	39.7	6.2	9.0	12.9
Florida.....	S	237,985	100.0	25.4	7.3	35.8	8.8	4.3	18.6
Georgia.....	S	43,461	100.0	13.0	12.3	45.5	6.0	4.6	18.6
Hawaii.....	W	12,210	100.0	42.1	13.4	24.1	2.0	4.6	13.9
Idaho.....	W	7,633	100.0	14.8	19.4	35.5	5.8	4.8	19.8
Illinois.....	MW	140,856	100.0	21.9	9.0	36.8	5.7	2.3	24.3
Indiana.....	MW	20,611	100.0	20.1	12.3	30.5	7.2	4.0	26.0
Iowa.....	MW	6,002	100.0	16.1	18.3	38.9	6.0	7.3	13.3
Kansas.....	MW	13,788	100.0	17.3	20.1	35.6	8.3	3.9	14.7
Kentucky.....	S	5,372	100.0	14.8	12.9	40.1	9.0	10.1	12.9
Louisiana.....	S	10,935	100.0	15.9	12.1	36.6	7.4	14.3	13.7
Maine.....	NE	882	100.0	17.5	13.6	40.6	8.2	11.5	8.7
Maryland.....	S	25,768	100.0	18.8	16.0	38.1	5.2	5.8	16.0
Massachusetts.....	NE	45,128	100.0	23.2	14.6	30.1	10.1	8.1	13.9
Michigan.....	MW	27,722	100.0	21.8	15.9	36.8	7.6	7.1	10.7
Minnesota.....	MW	12,272	100.0	16.7	15.4	39.1	7.0	8.3	13.6
Mississippi.....	S	4,328	100.0	10.9	9.4	51.8	8.6	8.8	10.6
Missouri.....	MW	9,534	100.0	15.8	15.9	36.9	6.6	10.4	14.3
Montana.....	W	1,527	100.0	13.2	16.9	35.8	5.6	11.9	16.6
Nebraska.....	MW	6,704	100.0	16.5	20.8	40.5	6.8	4.7	10.8
Nevada.....	W	35,338	100.0	17.6	12.2	40.3	4.9	4.0	20.9
New Hampshire.....	NE	2,155	100.0	20.8	11.8	29.5	4.3	13.8	19.8
New Jersey.....	NE	115,298	100.0	24.7	12.8	36.2	7.3	4.3	14.7
New Mexico.....	W	65,849	100.0	11.2	16.1	23.9	16.9	4.3	27.6
New York.....	NE	343,763	100.0	20.4	11.8	32.1	7.0	3.3	25.4
North Carolina.....	S	32,607	100.0	15.0	14.6	41.9	6.2	4.7	17.7
North Dakota.....	MW	625	100.0	21.8	12.2	41.0	4.5	13.8	6.9
Ohio.....	MW	18,266	100.0	24.0	15.3	35.7	8.3	7.3	9.5
Oklahoma.....	S	12,089	100.0	18.7	18.1	38.3	7.5	7.2	10.2
Oregon.....	W	22,127	100.0	18.4	15.6	41.0	4.9	5.5	14.7
Pennsylvania.....	NE	36,731	100.0	26.3	12.9	30.9	7.2	6.6	16.1
Rhode Island.....	NE	11,597	100.0	17.1	13.2	26.1	5.9	6.0	31.7
South Carolina.....	S	9,315	100.0	12.5	13.2	39.3	6.1	7.2	21.7
South Dakota.....	MW	916	100.0	18.4	15.3	41.8	3.8	11.4	9.3
Tennessee.....	S	11,361	100.0	13.5	15.2	40.5	5.3	8.0	17.5
Texas.....	S	531,136	100.0	13.9	13.0	35.6	12.1	3.4	21.9
Utah.....	W	16,956	100.0	16.0	19.0	41.7	6.0	4.6	12.7
Vermont.....	NE	550	100.0	16.2	11.8	34.7	7.1	15.3	14.9
Virginia.....	S	31,382	100.0	18.2	17.4	39.7	6.7	6.5	11.5
Washington.....	W	39,024	100.0	16.8	15.5	37.1	6.2	6.1	18.3
West Virginia.....	S	1,200	100.0	12.6	9.6	52.0	10.3	10.7	4.9
Wisconsin.....	MW	17,506	100.0	23.7	12.0	32.2	7.8	5.6	18.6
Wyoming.....	W	2,484	100.0	13.8	17.3	31.1	8.3	6.3	23.2

Source: U.S. Bureau of the Census, 2000 Census.

NOTES:

1/ Hispanics may be of any race.

2/ Flag type definitions: "Multiple origin" means that the respondent provided two or more origin responses, but only one response was allowed; "From race" means that an origin was obtained from a write-in response to the question on race; "Within household" means that origin was obtained from someone within the household of the respondent; "Hot deck surname" means that origin was obtained from another neighboring household using a hot deck procedure in which the respondent's last (Spanish or non-Spanish) determined the hot deck from which an origin could be assigned; name "Hot deck no surname" means that the respondent obtained an origin from a hot deck containing reported origins of people who either did not provide a name or their name could not be determined to be Spanish or not Spanish; and lastly, "Substitution" means that origin and all other characteristics for everyone in the household were obtained from neighboring households using substitution procedures.

3/ Puerto Rico is not included in this table.

4/ Includes Housing Unit Population and Group Quarters Population.

Table 13. Total Allocation counts for Non-Hispanics by Type of Allocation Flag for the United States, Regions, and States: 2000.

Source: U.S. Census Bureau
Internet Release date: July 1, 2002

Geographic area	State by region	Total Non-Hispanic Allocations	Percent distribution by flag type 1/					
			Total	Not Allocated	Allocated			
				Multiple origin	Within household	Hot deck surname	Hot deck no surname	Substitution
United States 2,3/		13,606,416	100.0	0.2	30.8	36.9	10.9	21.1
Region								
Northeast.....	(NE)	2,738,739	100.0	0.2	30.2	34.5	11.3	23.8
Midwest.....	(MW)	2,842,457	100.0	0.1	32.2	38.8	10.0	18.9
South.....	(S)	5,298,436	100.0	0.2	28.3	40.9	10.0	20.6
West.....	(W)	2,726,784	100.0	0.4	35.0	29.7	13.2	21.8
State								
Alabama.....	S	301,145	100.0	0.1	24.6	44.2	8.4	22.7
Alaska.....	W	33,047	100.0	0.3	44.1	23.3	16.3	16.0
Arizona.....	W	239,553	100.0	0.2	27.1	29.4	11.0	32.3
Arkansas.....	S	143,220	100.0	0.1	29.1	46.3	10.5	14.0
California.....	W	1,378,028	100.0	0.4	38.2	28.7	13.7	18.9
Colorado.....	W	180,735	100.0	0.2	29.8	33.7	12.3	24.0
Connecticut.....	NE	147,241	100.0	0.3	30.9	34.4	16.0	18.4
Delaware.....	S	51,627	100.0	0.1	23.7	30.1	16.1	29.9
District of Columbia.....	S	59,077	100.0	0.1	24.8	30.3	24.4	20.4
Florida.....	S	756,645	100.0	0.4	29.3	36.8	10.1	23.5
Georgia.....	S	535,774	100.0	0.1	28.5	43.2	7.8	20.4
Hawaii.....	W	89,739	100.0	1.9	42.7	22.9	15.1	17.4
Idaho.....	W	50,354	100.0	0.1	32.2	29.5	12.2	26.0
Illinois.....	MW	619,661	100.0	0.1	30.9	35.0	9.0	25.1
Indiana.....	MW	301,588	100.0	0.1	26.2	36.4	7.7	29.6
Iowa.....	MW	98,015	100.0	0.1	32.7	39.7	12.7	14.8
Kansas.....	MW	100,938	100.0	0.2	32.1	39.2	12.1	16.4
Kentucky.....	S	194,983	100.0	0.1	27.0	49.0	9.8	14.1
Louisiana.....	S	279,691	100.0	0.1	30.0	42.6	9.3	18.0
Maine.....	NE	51,061	100.0	0.2	30.2	37.9	13.0	18.7
Maryland.....	S	331,643	100.0	0.1	28.3	36.0	9.2	26.4
Massachusetts.....	NE	304,217	100.0	0.4	30.0	37.7	13.9	17.9
Michigan.....	MW	469,563	100.0	0.1	35.4	41.3	9.8	13.4
Minnesota.....	MW	190,855	100.0	0.1	35.2	36.4	12.1	16.0
Mississippi.....	S	196,573	100.0	0.1	31.8	46.7	9.8	11.5
Missouri.....	MW	240,306	100.0	0.2	32.5	42.6	10.1	14.6
Montana.....	W	41,008	100.0	0.1	31.0	31.0	16.7	21.1
Nebraska.....	MW	55,154	100.0	0.1	36.0	35.7	13.8	14.4
Nevada.....	W	104,845	100.0	0.3	28.3	23.8	13.1	34.4
New Hampshire.....	NE	58,297	100.0	0.1	25.9	29.6	14.8	29.5
New Jersey.....	NE	395,706	100.0	0.2	34.0	32.9	11.9	20.9
New Mexico.....	W	68,016	100.0	0.2	30.2	20.8	20.2	28.6
New York.....	NE	1,116,300	100.0	0.2	29.8	32.0	9.1	28.9
North Carolina.....	S	432,874	100.0	0.1	27.6	45.3	8.9	18.1
North Dakota.....	MW	22,926	100.0	0.1	33.7	32.6	18.4	15.1
Ohio.....	MW	477,957	100.0	0.1	33.3	43.8	9.2	13.6
Oklahoma.....	S	156,920	100.0	0.2	31.2	43.3	10.5	14.7
Oregon.....	W	140,626	100.0	0.2	31.6	33.3	12.1	22.8
Pennsylvania.....	NE	579,444	100.0	0.1	29.7	39.6	10.9	19.7
Rhode Island.....	NE	57,244	100.0	0.5	23.8	31.2	20.2	24.2
South Carolina.....	S	258,472	100.0	0.1	27.1	41.8	8.9	22.2
South Dakota.....	MW	30,562	100.0	0.1	34.5	29.0	17.3	19.1
Tennessee.....	S	300,066	100.0	0.1	27.0	44.6	9.2	19.2
Texas.....	S	847,930	100.0	0.2	28.1	34.4	12.3	25.0
Utah.....	W	82,741	100.0	0.1	46.2	28.2	9.0	16.5
Vermont.....	NE	29,229	100.0	0.1	27.2	26.0	14.7	32.0
Virginia.....	S	368,922	100.0	0.1	28.9	43.4	10.0	17.7
Washington.....	W	293,758	100.0	0.2	29.4	37.8	12.2	20.4
West Virginia.....	S	82,874	100.0	0.1	28.3	49.0	12.5	10.1
Wisconsin.....	MW	234,932	100.0	0.1	30.5	37.5	10.8	21.2
Wyoming.....	W	24,334	100.0	0.2	28.8	22.2	14.8	34.1

Source: U.S. Bureau of the Census, 2000 Census.

NOTES:

1/ Flag type definitions: "Multiple origin" means that the respondent provided two or more origin responses, but only one response was allowed; "Within household" means that origin was obtained from someone within the household of the respondent; "Hot deck surname" means that origin was obtained from another neighbor household using a hot deck procedure in which the respondent's last name (Spanish or non-Spanish) determined the hot deck from which an origin could be assigned; "Hot deck no surname" means that the respondent obtained an origin from a hot deck containing reported origins of people who either did not provide a name or their name could not be determined to be Spanish or not Spanish; and lastly, "Substitution" means that origin and all other characteristics for everyone in the household were obtained from neighboring households using substitution procedures.

2/ Puerto Rico is not included in this table.

3/ Includes Housing Unit Population and Group Quarters Population.

Table 14. Allocation Rates by Type of Hispanic Origin for Census 2000, Census 1990 and Census 2000 Supplemental Survey, for the United States 1/

Source: U.S. Census Bureau
Internet Release date: July 1, 2002

Hispanic Origin	Census 2000	Census 1990	C2SS 2000
Total Population 2/	5.4	10.4	3.6
Hispanic 3/	6.3	6.0	2.7
Mexican	6.0	4.3	2.5
Puerto Rican	6.3	8.2	2.4
Cuban	6.6	9.2	3.3
Other Hispanic	6.8	8.9	3.4
Not Hispanic	5.3	10.8	3.7

Source: U.S. Bureau of the Census, 2000 Census;
1990 Census, Census 2000 Supplemental
Survey.

NOTES:

1/ Puerto Rico is not included in this table.

2/ Housing Unit Population Only.

3/ Hispanics may be of any race.

* na = not available.

**Table 15. Total Edit and Allocation Counts by Type of Allocation Flag for Census 2000
Census 1990 and Census 2000 Supplemental Survey, for the United States 1/**

Source: U.S. Census Bureau

Internet Release date: July 1, 2002

Subject	Census 2000	Census 1990	C2SS 2000
Total Allocations 2,3/	15,861,051	25,498,385	10,188,127
Percent distribution:			
Total	100.0	100.0	100.0
Multiple origin	3.8	na	2.8
From race	2.6	1.5	1.3
Within household	34.4	16.6	32.8
Hot deck surname	28.7	na	62.3
Hot deck no surname	8.8	75.6	0.7
Substitution	21.7	6.3	na

Source: U.S. Bureau of the Census, 2000 Census,
1990 Census, Census 2000 Supplemental Survey.

NOTES:

1/ Puerto Rico is not included in the table.

2/ Housing Unit Population Only.

3/ Flag type definitions:

"Multiple origin" means that ethnic origin was obtained from multiple ethnic origins reported from the respondent;

"From race" means that Hispanic origin was obtained from the race question; "Within household" means that ethnic origin was obtained from within the household of the respondent; hot deck means that ethnic origin was obtained using the hot deck procedure; and lastly, "Substitution" means that ethnic origin was obtained using the substitution method.

* na = not available.

Table 16. Total Edit and Allocation Counts by Type of Hispanic Origin and by Type of Allocation Flag for Census 2000, Census 1990 and Census 2000 Supplemental Survey, for the United States 1/

Source: U.S. Census Bureau
Internet Release date: July 1, 2002

Subject	Census 2000		Census 1990		C2SS 2000	
	Hispanic 2/	Non-Hispanic	Hispanic 2/	Non-Hispanic	Hispanic 2/	Non-Hispanic
Total Allocations 3,4/	3,160,248	12,700,803	1,693,165	23,805,220	1,335,165	8,852,962
Percent distribution:						
Total	100.0	100.0	100.0	100.0	100.0	100.0
Multitple origin	18.3	0.2	na	na	20.1	0.2
From race	13.2	na	22.0	na	9.8	na
Within Household	39.8	33.0	37.1	15.2	47.9	30.6
Hot deck surname	7.4	33.9	na	na	20.6	68.6
Hot deck no surname	3.3	10.2	29.9	78.9	1.6	0.6
Substitution	17.9	22.6	11.0	5.9	na	na

Source: U.S. Bureau of the Census, 2000 Census,
1990 Census, Census 2000 Supplemental Survey.

NOTES:

1/ Puerto Rico is not included in the table.

2/ Hispanics may be of any race.

3/ Housing Unit Population only.

4/ Flag type definitions:

"Multiple origin" means that ethnic origin was obtained from multiple ethnic origins reported from the respondent;

"From race" means that Hispanic origin was obtained from the race question; "Within household" means that ethnic origin was obtained from within the household of the respondent; hot deck means that ethnic origin was obtained using the hot deck procedure; and lastly, "Substitution" means that ethnic origin was obtained using the substitution method.

* na = not available.

**Table 17. Allocation Rates for the Hispanic Origin Question
by Race for the United States: 1990 Census**

Source: U.S. Census Bureau
Internet Release date: July 1, 2002

(Includes only the population in housing units)

Race	Percent Allocated
Total Population	10.5
White	9.6
Black	18.4
American Indian and Alaska Native	10.2
Asian and Pacific Islander	9.7
Other Race - Hispanic Write-in	1.0
Other Race - Not Hispanic Write-in	2.4

Table 18. Allocation of Origin - 100% Edit Outcome vs Sample Edit Outcome for the United States: 1990 Census

Source: U.S. Census Bureau
Internet Release date: July 1, 2002

(Based on Weighted Data from Sample Forms)

Allocated on 100% Edit - Total 1/

Race	Total	Edit Outcomes Agree		Edit Outcomes Disagree		Ratio	Net Disagreement
		Not Hispanic	Hispanic	Hispanic-100% Not Hispanic-Sample	Not Hispanic-100% Hispanic-Sample		
	A	B	C	D	E	D/E * 100	(D-E)
Total	8,968,527	8,099,909	545,921	241,720	80,977	3.0	160,743
White	6,622,624	6,129,349	256,847	168,943	67,485	2.5	101,458
Black	1,756,863	1,662,836	40,409	44,076	9,542	4.6	34,534
American Indian and Alaska Native	93,299	81,168	3,850	6,713	1,568	4.3	5,145
Asian and Pacific Islander	244,400	220,833	5,625	15,950	1,992	8.0	13,958
Other Race - Hispanic	204,592	0	201,989	2,603	0	(NA)	2,603
Write-in Other Race - Not Hispanic	46,749	5,723	37,201	3,435	390	8.8	3,045
Write-in							

Allocated on 100% Edit - Allocated on Sample Edit 1/

Race	Total	Edit Outcomes Agree		Edit Outcomes Disagree		Ratio	Net Disagreement
		Not Hispanic	Hispanic	Hispanic-100% Not Hispanic-Sample	Not Hispanic-100% Hispanic-Sample		
	A	B	C	D	E	D/E * 100	(D-E)
Total	8,642,037	7,996,905	378,164	224,074	42,894	5.2	181,180
White	6,466,947	6,078,327	191,484	160,295	36,841	4.4	123,454
Black	1,718,005	1,639,937	32,724	41,239	4,105	10.0	37,134
American Indian and Alaska Native	91,209	80,806	2,986	6,588	829	7.9	5,759
Asian and Pacific Islander	208,992	192,730	3,939	11,449	874	13.1	10,575
Other Race - Hispanic	114,454	0	112,419	2,035	0	(NA)	2,035
Write-in Other Race - Not Hispanic	42,430	5,105	34,612	2,468	245	10.1	2,223
Write-in							

Table 18. Allocation of Origin - 100% Edit Outcome vs Sample Edit Outcome for the United States: 1990 Census (Continued)
(Based on Weighted Data from Sample Forms)

Allocated on 100% Edit - Not Allocated on Sample Edit 1/

Race	Total	Edit Outcomes Agree		Edit Outcomes Disagree		Ratio	Net Disagreement
		Not Hispanic	Hispanic	Hispanic-100% Not Hispanic-Sample	Not Hispanic-100% Hispanic-Sample		
	A	B	C	D	E	D/E * 100	(D-E)
Total	326,490	103,004	167,757	17,646	38,083	0.5	-20,437
White	155,677	51,022	65,363	8,648	30,644	0.3	-21,996
Black	38,858	22,899	7,685	2,837	5,437	0.5	-2,600
American Indian and Alaska Native	2,090	362	864	125	739	0.2	-614
Asian and Pacific Islander	35,408	28,103	1,686	4,501	1,118	4.0	3,383
Other Race - Hispanic	90,138	0	89,570	568	0	(NA)	568
Write-in Other Race - Not Hispanic	4,319	618	2,589	967	145	6.7	822

1/ During 100-percent processing for the Hispanic origin question in the 1990 census, only optical marks, but no write-in responses were captured. Thus, people who provided a write-in response but did not fill the "Other Hispanic" circle were treated as a nonresponse in the 100-percent edit and could have been assigned either as Hispanic or not Hispanic. In addition, those people who provided a write-in response and marked the "Other Spanish/Hispanic" circle would have been identified as "Other Spanish/Hispanic" in the 100-percent edit and then either as Hispanic or not Hispanic in the sample edit depending on whether the write-in response was Hispanic or not Hispanic in sample coding operations.

(NA) Not Applicable

Table A. Differences Between Census 2000 and 1990 Census Edit and Imputation Procedures

Source: U.S. Census Bureau
Internet Release date: July 1, 2002

for the Questions on Place of Birth and Hispanic Origin		
Editing Procedure	Census 2000 Procedure	1990 Procedure
<i>Place of Birth</i>		
Allocation of detailed country of birth	Imputed detailed country of birth and state of birth codes	Only detailed state of birth was imputed
Use of native or foreign born check boxes in question format	Included check boxes "In the United States" and "Outside the United States" as well as write-in areas for specific state/country of birth. These check boxes are used in the edit procedures.	There were no check boxes - only a space for a write-in entry.
Control variables in hot deck matrix	Asian was included as a control variable in hot deck matrix. A combined race/Hispanic variable was used as control (Hispanic; White not Hispanic; Black not Hispanic; Asian not Hispanic; Other not Hispanic)	White, Black and Other were the race categories used. Race was considered separately from Hispanic.
Relationship categories	Son/daughter (natural and adopted) and stepson/daughter were considered jointly for assigning place of birth code	There was no adopted son/daughter category in 1990. Son/daughter and stepson/ daughter were edited separately.
Group Quarters	GQ and household population are edited separately.	GQ and household population were included in the same edit.
<i>Hispanic Origin</i>		
Reporting of more than one origin	Reporting more than one origin not allowed - Resolution to one origin using a set of rules; all responses retained for research purposes.	Reporting more than one origin not allowed- Data capture and data processing retained only one origin.
Within-household imputation	Assignment of origin based on another person in household (according to a pre-defined priority order of household relationship) <i>with the same race</i> .	Assignment of origin based on another person in household according to a pre-defined priority order of household relationship. <i>Race match not required</i> .
Surname-assisted hot decks	Separate hot decks depending on whether the surname is Spanish; not Spanish; not clearly Spanish or not Spanish or not reported.	Separate hot decks not used.
Joint allocation of race and origin	If both race and origin were not reported, an attempt was made to assign both race and origin from the same donor within the household. If hot deck assignment was required, both race and origin always were assigned from a single donor	If both race and origin were not reported, each was assigned independently of the other. Race and origin might not necessarily come from the same donor.